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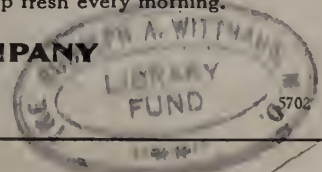
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The
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ORIGINAL ARTICLES

INTRODUCTORY REMARKS ON FOCAL RELATION TO CHRONIC DEAFNESS.

By FRANCIS P. EMERSON, M. D.
Boston, Mass.

I feel very much honored in being able to talk to you to-night and in the very good attendance for so early in the season, which I take to mean that either you are a very courteous society or my subject may have some interest to you all, although its application is to a special department of medicine.

I want to say something, in opening, on the general subject of focal infections and then try to apply this to the question of deafness. Deafness is a subject upon which we are not agreed, either in its pathology or treatment, but one in which, during the last few years, there has been a broad interest and great advance in relieving a condition of such importance to the community.

In a normal throat there are several varieties of bacteria, among the more important of which are the streptococci, pneumococci, Pfeiffer's bacilli, staphylococci, meningococci, diphtheria and diphtheroids. Possibly, the viruses natural or modified in measles, scarlet fever, anterior poliomyelitis, and lethargic encephalitis. In the streptococcus group are certain strains constantly found in the tonsils or throat ordinarily doing no harm. At times, however, they take advantage of conditions in the host and invade the tissues, causing local or general infection. The altered conditions making infection possible are chiefly in the host. (D. J. Davis, M. D., Pathological Department, University of Illinois.) These bacterial conditions in which the resistance of the host is lowered may be followed by such general systemic conditions as nephritis, endocarditis, arthritis, etc.

The aurist and rhinologist see for the most part in their office chronic diseases. The histories which the writer has taken during the last ten years have brought out certain facts which tend to show that the primary infection in the early beginning of the focal process was the result of measles, scarlet fever, influenza or diphtheria. Following this primary infection the patient, over a number of years,

might show a variety of diseased conditions which might depend upon the activity of the organism causing the primary trouble. This is a very important phase of focal infections. Do we have repeated acute infections in tissue which is undergoing retrograde changes, or do we have a chronic infection which is present in the host over a long number of years and where lowered resistance is followed by an acute exacerbation? The latter I believe to be the case. If so, then on examination to-day of a patient who comes in complaining of the results which may follow a localized infection, it is necessary, on account of the secondary foci that have resulted, to cover quite a little more ground than formerly. We examine the nose, and note the conditions of the mucous membrane, transilluminate the sinuses, examine the vault of the pharynx, the condition of the tonsils and teeth, and later confirm this examination by an X-ray of the sinuses and films of all suspected teeth. The two most common foci, in our experience, that have resulted in the disaster of the patient are the conditions of the teeth and submerged tonsils. There was, at one time, among the dentists, great enthusiasm in regard to the relation of apical abscesses to rheumatism. This has somewhat subsided because they found that all cases of rheumatism were not cured by extraction of teeth and the healing of these necrosed areas. It is not sufficient for us to look after these diseased teeth but the chronic infection must be cleared up in the throat, and it is necessary that you see the films of these teeth yourself and know that they are looked after by a dentist who will cooperate with you in relieving foci of infection, even if the teeth have to be extracted.

THE MINOR ROLE OF THE CONDUCTION APPARATUS IN SLOWLY PROGRESSIVE DEAFNESS.*

FRANCIS P. EMERSON, M. D.,
Boston, Mass.

The function and relative importance of the conduction apparatus, given a normal end organ and normal hearing, is well under-

*Read before the Providence Medical Association, October 4, 1920.

stood. The physics of sound production, transmission and perception in health obey definite laws that are accepted by all aurists in principle, if not in detail. The object of this paper is to ask your consideration to the relation of the conduction apparatus to certain pathological conditions that have resulted in, or are causing, deafness.

Our present conception of the etiology of non-suppurative deafness has been influenced by the gradual differentiation of the function of the perception and conduction apparatus. Among the many questions that could not logically be explained by attributing to the conduction apparatus the cause for the progressive loss of hearing through interference with the sound waves, was the difficulty in accounting for the upper part of the scale *always* being lost first. This was usually accompanied by tinnitus, that is labyrinthine irritation. Again, in progressive deafness there was a tendency for the hearing test to become equal, until by the time the low limits had been raised to about 512C.² the Rinné and low limits would not vary even a few seconds for the two sides. It was not conceivable that the pathology of the Eustachian tube and middle ear could result in equal loss of function in so many cases. Third, when supuration had resulted in the destruction of the membrana propria, with necrosis and sloughing of the malleus and incus, it was observed that in many cases the hearing was exceptionally good, especially if the process was of the fulminating type. At times, even sound perception might be painfully acute, although the conduction apparatus was disorganized. This leaves only the stapes. Is this indispensable to normal hearing? If we have an immovable stapes with a normal end organ, even this condition if it were possible would not preclude fairly good hearing for the spoken voice. When the stapes becomes fixed in the oval window, as the result of fibrous bands formed during the course of a chronic non-suppurative otitis media, the perception apparatus has been functionally impaired long before the stapes loses its mobility. When fixation of the stapes is accompanied by profound deafness there is also an associated perception deafness that is

more important than the condition of the oval window. It is then outside the conduction apparatus that we must look for the real cause in progressive loss of hearing. In the experience of the writer there is no such thing as a pure conduction deafness. In every case of deafness, in whatever category you may classify it, there is diminished tone perception from the beginning. It is this impairment of tone perception that is the important problem in any attempt to arrest or restore lost hearing. Lastly, it is common knowledge that nerve deafness frequently follows acute and chronic systemic poisons and that certain drugs in full dosage have a disastrous effect on the organ of Corti. These findings make it necessary to reconstruct our otologic concept to conform to the newer pathology, or, as so often happens, confirm our clinical findings but explain the etiology in accordance with our recent views. It is true that certain types of infection show inflammatory reaction that in one case is confined to the mucous membrane, in another to the fibrous tissue and in still others to the osseous elements as end results. These manifestations of involvement of the middle ear are of secondary importance, however, as compared to the question of damage temporary or permanent to the end organ. Let us take the nomenclature of the last International Congress and try and interpret it along these lines. In the child obstructed with adenoids, or in the adult with tubo-tympanic catarrh, the deafness is not due so much to the closure of the Eustachian tube and the interference with the conduction apparatus as such, but rather that the closure of the tube is followed by absorption of air in the middle ear, indrawing of the membrana tympani, impaction of the stapes in the oval window and labyrinthine disturbance. This is accompanied by tinnitus and a loss of tone perception in the upper part of the scale which is functional for a time, but is ultimately followed by nerve degeneration. To be sure, in a child with adenoids, the low tone limit may be raised temporarily. This becomes normal, however, as the Eustachian tube opens, but the loss in the upper tone limit continues if the loss of hearing is progressive. When, there-

fore, in a case of chronic catarrhal otitis media the low limits are again raised, the upper limits have been markedly cut down. This would indicate that the progress of chronic deafness was not because of increasing obstruction in the middle ear, but because of further impairment of tone perception.

In those cases of (O.M.C.C.) chronic tubotympanic catarrh we find not only that the upper tone limits were lost first, but that where the course has extended over a number of years there may be also areas of tone deafness with the lower limits unchanged. These findings are accompanied by a ground glass appearance of the membrana tympani, loss of the light reflex and indrawing. Where the changes in the membrana tympani were characteristic, there was no question as to diagnosis. There was a type of case, however, that did not show changes in the membrana tympani and where we were accustomed to find a clean nasopharynx. These cases were classified as catarrhal adhesive otitis media, or, if the deafness was pronounced with changes in the bone conduction, they were called by some, beginning otosclerosis. It was not uncommon to find typical changes on one side and a clear membrana tympani on the opposite side and yet the hearing, after a number of years, might be almost identical. This type of case, whether atypical chronic catarrhal otitis media or not, begins with loss of the upper tone limits and tinnitus. There may or may not be areas of tone deafness. As the disease progresses the hearing gradually tends to become the same on both sides, the tinnitus becomes more high pitched and there may or may not be vertigo. The progress of the disease is not, in the judgment of the writer, influenced very much by the changes in the conduction apparatus. The primary step is a closure of the tube causing intralabyrinthine changes in the perception apparatus and a raising temporarily of the low limit. The process in the Eustachian tube may then run its course and yet the deafness goes on, influenced by the acute exacerbations of a toxic focus, i.e., after the deafness is once established it is progressive not because of

increasing mechanical obstruction from adhesions, tissue thickening or bony deposits in the conduction apparatus, but because of loss of tone perception from damage to the end organ, from the reaction to a definite chronic infection. That the upper conversational limit is first impaired has been confirmed by the audiometer of Dr. Dean.

Silent areas occur so often in non-suppurative otitis media that the hearing test may be misleading. If we happen to test our bone conduction with a fork corresponding to the silent area it would, of course, not be heard or be transmitted to the other side. Even an approximately correct conclusion in regard to hearing cannot be reached without using all the forks from 96A. to 2048C.⁴, nor without several tests by the same observer in a given case. As before stated, the upper part of the scale is lost first, and, as we would expect, both air and bone conduction are lowered for certain forks unless there is a concurrent middle ear, for sound waves, produced by the striking of a given fork, are registered in the same part of the perception apparatus, whether passing through a media of air or bone. It follows, then, that with no obstruction in the middle ear any lowering of bone conduction must be accompanied by a lowering of air conduction for the same fork. On the other hand, any obstruction in the middle ear would raise the bone conduction and lower the air conduction for forks below 512C.². The higher the fork required to register a lowering of bone conduction the better the prognosis (Miss C. G.). The hearing test alone with all the forks is the only guide in estimating the remaining function in any given case of deafness. This is only a help, for no hearing test and no aural examination now known can tell us whether nerve degeneration has actually commenced. The evidence increases that while we may have pure nerve deafness, we never have pure conduction deafness; the fact that some nerve impairment exists in every case of deafness was not recognized, as in the usual tests we rarely resorted to all the forks. The loss of the upper register, whose lower limit is roughly indicated by the whispered voice, is then *prima facie* evidence that the deafness is due to damage to the end organ.

Inspection of the membrana tympani gives us no information as to the function of hearing, neither does it enable us to form any conception as to whether we can hold out any hope for the future. The immobility of the membrana tympani, malleus or incus, areas of atrophy, or even the absence of the membrana propria, do not justify a gloomy prognosis nor give much information that is helpful to the patient. These are end results and unless we have some definite pathology that explains the different steps that have led up to this condition and can determine whether the cause is still active, we are not in a position to do the patient any good.

ETIOLOGY. From the experience of the writer the primary infection, so far as the deafness is concerned, is usually in the lymphoid tissue. In children, primarily, in tonsil and adenoid infection. In adults, without regard to age limit, usually in the tonsils, especially the supratonsillar fossa, with secondary involvement of the surrounding lymphoid tissues, especially in the pharynx. These foci date back to the infectious diseases and are subject to repeated exacerbations. Even when there is obvious sinusitis or bony necrosis in the mandible, in the majority of cases there had been a preceding chronic infection in Waldeyer's ring, which apparently started in the tonsil. The lymphatic connection between the supratonsillar fossa and the middle ear is direct, and there is usually a history of sore throats as a child but none of late years.

PROGNOSIS. The writer is willing to admit that he does not know from the first examination whether an advanced case will improve or not. It all depends on the amount of damage to the perception apparatus. The membrane tympani, malleus and incus may be gone and the promontory bare, and yet if this was the result of a sudden explosion of a virulent infection the nerve function would be but little impaired. On the other hand, the membrana tympani may appear almost normal with a progressive secondary nerve atrophy so far advanced that the case is beyond help. It is rarely the case that one ear (usually the one last infected) does not im-

prove. We have much to learn in the treatment of those cases where nerve degeneration has actually commenced. After the cause has been removed, whether we can, in these advanced cases, reclaim any lost function by auditory re-education, electricity, the use of strychnine, etc., is still an open question. The removal of toxic foci thoroughly must always be an individual equation. The war experience has taught us that much can be done by perseverance in restoring lost function. In the judgment of the writer no department of otology offers so much encouragement or so large a field of usefulness as the treatment of slowly progressive deafness.

TREATMENT. Treatment of the Eustachian tubes, either by bougies or inflation through a septic field, is never justifiable as a routine and never does any good in chronic cases. It can readily be understood that anything causing a secondary pharyngitis would have a bad effect on the hearing. As a matter of fact, the writer has never seen marked improvement in hearing in chronic deafness from any treatment that did not include freeing the supra-tonsillar fossa of infected tissue, whether this be in patients of ten or sixty-five years of age. Do not try to increase the mobility of the ossicles or pay any attention to the conduction apparatus except to free it of infection. Remember that toxic products are being constantly thrown into the circulation and that the perception apparatus suffers first from toxemia and then from nerve degeneration. In a certain number of cases the writer believes that after all sources of re-infection have been removed, that much can be done by re-education of the perception centers. That is, the central end organ does not seem to interpret the sound waves on account of functional disuse. On the other hand, it looks as though a highly specialized nerve, like the nerve of hearing, when degeneration has commenced, was uninfluenced by treatment. Experience has shown that very many cases given up as hopeless, on account of nerve degeneration, were only functionally crippled. These cases will improve and stay improved with no other treatment than removal of the cause of the deafness. More-

over, these cases are not unusual, for it is the exception if one ear or the other does not gain if the low tone limit is still unchanged.

B. O. M. C. C.

S. S.—Eight years. School. December 27, 1919. P. H.—T and A operation at Massachusetts General Hospital three years ago. Measles two months ago and since then she has been deaf with ringing in both ears. EXAMINATION—Ears: A. D., membrana tympani indrawn. Dull. No thickening. A. S., membrana tympani indrawn. Light reflex present but not clear. Pharynx—Epipharynx blocked by a large adenoid. Sinuses—Transillumination clear except over ethmoids. DIAGNOSIS—Infective O. M. C. C. TREATMENT—Adenoid removed under gas. February 14, 1920—Has had a cold for two weeks. RESULT—This case improved in hearing distance twenty-three feet without politizerization or any direct treatment of the ears. The noises still continue.

Terminal stage in a case of slowly progressive loss of hearing extending over twenty years. Mrs. R.—Fifty-two years. Married. P. H.—Always well. No history of acute infections. Under constant treatment directed especially to the tubes by a competent aurist. No history of vertigo or tinnitus. A. U.—Ground glass appearance. L. R. gone. No areas of atrophy or thickening. No stapes fixation. EXAMINATION — Transillumination negative. No pus in nares. M. M. normal. Septum straight. Breathing free. No infection. Pharynx—Lateral pharyngitis marked but whole pharynx shows a low-grade pharyngitis. Tonsils—Cryptic tonsillar disease and muco-pus in both. Pharyngeal secretions changed and patient gets up every morning to clear her throat and sometimes during the night. P. S.—The chronic focal infection in the tonsil, low-grade pharyngitis and infection of the lymphoid tissue in the mouth of the tube followed by deafness, would seem obvious.

Fulminating case with great damage to middle ears. Marked improvement in hearing (without inflation), because the perception apparatus was not injured sufficiently to be followed by nerve degeneration. Miss C. G.—Twenty-eight years. Born Sweden. Single. Salesgirl. P. H.—Measles four years. Aural discharge from both ears until

fifteen years old. Then T and A operation and ears were dry until six months ago. Has colds every winter with swellings under jaws and soreness back of ears. No general illness since the measles but does not feel strong. EXAMINATION—A. S., O. M. S. Ch. A. D., Eff. O. M. S. Ears examined by Dr. C. T. P. Considerable tonsil tissue in supra-tonsillar fossae containing muco-pus. Transillumination negative. Band passing from left eustachian tube to posterior pharyngeal wall. Low-grade pharyngitis. A. S.—Directly ahead promontory is covered with granulations of watery pink color. The membrana tympani is entirely absent in the posterior half. Posteriorly can be seen niche of round window. Anteriorly and above remains of malleus. Shrapnel's membrane is covered with grayish membrane. Slight discharge. DIAGNOSIS—O. M. S. Ch. A. D.—Dry. Horse-shoe shaped perforation involving entire portion of membrana tympani up to anterior and posterior ligament. Malleus intact with lower and tied down to promontory by band of adhesions. Underneath posterior superior border of perforation can be seen incudo-stapedial joint. Along posterior border of perforation can be seen niche of round window. Promontory is covered by mucus membrane. Tinnitus like steam. DIAGNOSIS—Eff. O. M. S. TREATMENT—Tonsillectomy at Massachusetts Charitable Eye and Ear Infirmary, October 31, 1919.

RESULT—In this case the conduction apparatus, if compared to a chain, has two or three links missing in its most vital part. The left ear still has a scanty discharge. The patient has had active ear involvement from childhood until twenty-eight years old, and yet the right ear gained twenty-five feet in four months and the left nineteen feet. No inflation at any time. After removal of the tonsils the accompanying infection in the pharynx and tube was treated as long as improvement continued.

B. O. M. C. C. (Infective.)

September 27, 1919. Miss H. A.—Twenty-three years. In college. Home, California. P. H.—For six to eight years catarrhal colds. Last year throat infections. T and A two years ago. Rheumatism in arms and shoulders at fourteen years. Measles at seven years. Four years ago A. D. commenced to be deaf. A. S.,

one year later. No tinnitus or vertigo. Think hearing is not so good as one year ago. EXAMINATION—A. D., Membrana tympani dull and indrawn. L. R., broken. A. S., membrana tympani indrawn. L. R., faint. No area of atrophy or thickening. Palate pale. TREATMENT—Infection cleared up. No *inflation* or any direct treatment of the ears. RESULT—From the first test one would hardly have expected the hearing to return to almost normal. The whispered voice improved from *three feet to twenty-five feet*. The tonsils were removed two years ago but apparently she had no after treatment for the epipharyngitis and tubes.

Miss A. M. C.—November 26, 1919. Single. Thirty-eight years. P. H.—Puffing tinnitus in right ear for seven years. Much worse for last two or three years. Slight vertigo. No history of aural discharge. Deafness has gradually developed. Has had an impacted molar removed. Tonsils and adenoid operation, also had tonsillar crypts burned with cautery recently. Duration of deafness uncertain. EXAMINATION—A. D., O. M. C. C. M. T., dull, indrawn. L. R., broken. A. S., O. M. C. C. M. T., dull, indrawn. L. R., broken. X-ray of sinuses shows slight increase in density over the right antrum. The left ethmoid cells are hazy. Teeth negative. Throat—Low-grade pharyngitis. Tonsil remains, especially in upper part of fossa. Mucopus present. OPERATION—December 30, 1919. Fenway Hospital. Tonsillectomy. Right antrum found negative. RESULT—In the right ear the lower limit was reduced from 512 to 256. The left ear gained twenty-one feet for the whispered voice and the low limit was reduced from 128 to ninety-six.

N. H. B.—Forty-two years. Mill superintendent, Maine. January 22, 1920. P. H.—Weight 210 pounds. Nose broken when a child and deflected to the right. Deformity includes the bony framework. Deviation of septum to right occludes that side completely. Any nasal irritation is now followed by lachrimation, anterior nasal discharge and redness of the nose accompanied by sneezing. Sleeps with his head raised and cannot stand much cold air. Has been growing deaf for seven years. Cannot hear his watch in the right ear by air conduction. Does not consider that his right ear is of any use in conversation. Two sisters are deaf.

No general illness. EXAMINATION—A. D., Membrana tympani dull and indrawn. L. R., broken and faint. A. S., membrana tympani indrawn. L. R., faint. No areas of thickening or atrophy. A. U., stapes movable. TREATMENT—January 31, 1920, operation at Brooks Hospital: (1) Submucous resection of septum. (2) Refracture of nasal bones and correction of external deformity. (3) Tonsillectomy. RESULT—In twenty-five days the hearing for the whispered voice in the *right* ear (which he considered of no use to him for conversation) had gained twenty-five feet and the low limit had changed from 512 to 256. The left ear had improved three feet. No inflation used.

CONCLUSIONS. 1. There is always a nerve element in every case of so-called conduction deafness of the progressive type.

2. The prognosis in regard to restoration of hearing is dependent upon the perception and not upon the conduction apparatus.

3. Toxic deafness and that due to beginning nerve degeneration cannot be differentiated by any aural examination.

4. Silent areas or islands of deafness are quite common in O. M. C. C.

5. The etiological factor is usually active in the lymphoid tissue as a chronic infection with acute exacerbations.

6. In some cases of long-standing deafness it would seem necessary to re-educate the central perception centers by exercises, after all sources of infection have been eliminated.

DISCUSSION OF DR. EMERSON'S PAPER.

DR. N. DARRELL HARVEY, Providence, R. I.—

I think this paper of Dr. Emerson's is a particularly timely one and just such a paper as should be read before a body like the present one. It also has a great deal of substance in it for otologists, but the whole subject, of the etiology and the cure of chronic deafness, is one which not only the medical profession in this community but the whole community should take cognizance of.

We have three classes of deafness—the hard of hearing, the moderately deaf and the deaf mute. These individuals have not received the attention from the medical profession nor from the community in which they live as they should have. A great deal of good work is being done throughout the

country in the way of bringing before the medical profession the chief causes of deafness, the treatment of cases of hard of hearing, and the re-education of the deaf mute.

Dr. Emerson has told us a good deal to-night, and advanced the theory about which I have thought a good many years, ever since I heard his first paper. The whole subject of focal infections in regard to the ear is something we all should thoroughly consider. No examination of the upper ear passage is complete without a thorough examination of the ears. When we have thoroughly established a pathological condition of the tonsil, of course the earliest surgical treatment should be adopted. No examination of the tonsil can be thoroughly made without what is called the "milking process."

Dr. Emerson has not said anything about sinus trouble but they come under the same head of focal infections. I believe that a great many conditions of the tonsils and adenoids which we see in children and adults are influenced by the inflammation of the sinuses. Very often by clearing up these acute conditions of the sinuses and nose we can do a great deal in conditions not necessitating the removal of the tonsils and adenoids of the patient. The whole picture of chronic deafness should be forcibly placed before the minds of the laity.

I think that, while otologists are doing all they can in this direction, it lies within the power of the medical profession to advise their patients in regard to the importance of the earliest possible treatment for beginning deafness.

DR. HARLAN P. ABBOTT, Providence, R. I.—I feel that we have been very fortunate to-night in having Dr. Emerson with us. He has been willing to come down here and read this paper for our instruction.

I feel that there is a good deal of valuable material for thought and for working out. I think that we have all felt in our work the importance of infections as a constant element in ear troubles, in deafness, in ear infections and ear nerve infections and that in a great many of our cases, in the history, we find that sometime during the course of the patient's life there has been a decided infection. It may have been scarlet fever, measles, typhoid or some luetic infection which has been the origin of the trouble. To me it is a very valuable thought that Dr. Emerson has brought out the importance of the continuation of these infections after the main poison has passed away. The infected area, which is not particularly apparent, but which is still pronounced, exacerbates at one time and an-

other. It is in these cases where there is very little to show on the surface that it is necessary to dig out the exact focus from which the infection, absorption and destruction to nerve function takes place. In other words, it is a matter of preventive medicine and surgery. The treatment of the ear after the injury has taken place is the question in which I feel that Dr. Emerson recognized the leading men of the country would differ as to the treatment to overcome the results of this infection after the infected areas have been removed. That element of discussion I will leave to my associates, who can handle it better than I.

DR. F. NOLTON BIGELOW, Providence, R. I.—According to my first teaching, the proper treatment for chronic catarrhal deafness was inflation from one to three times a week, continued more or less indefinitely. We were taught that even though this treatment did not appreciably help the hearing, it would prevent the hearing from getting worse. In practice, I found on checking up by repeated hearing tests, that in a certain number of cases the hearing grew worse faster under treatment than it would have without any treatment. In other words, the treatment was doing more harm than good. However, this does not apply to all cases. Dr. Emerson has brought forward something which all of us can apply, otologists and general practitioners as well. It is up to the general practitioner especially, as he usually sees the patient first, to eliminate all sources of focal infection. When these sources have been removed, there is something else that may benefit the patient, namely, re-education. When their hearing becomes impaired, many people simply give up trying to hear, and we have an atrophy of disuse added to the original trouble. It is very important that these people be encouraged to use their ears as much as possible in their every day life. In addition, give them some definite exercise to do every day. A good exercise is to have the patient listen to a loud ticking clock and then move away from the sound till he has to "strain" his ears in order to hear it. Better still, is to have a friend read or talk while the patient is far enough away so he has to make a decided effort to hear. To accomplish anything, these exercises must be practiced daily and not over ten or fifteen minutes at a time.

I think with Dr. Emerson that a focus of infection is a definite thing, that is to say it is a pus infection in the tonsils, teeth or somewhere. Deviations of the septum, spurs and the like, by obstructing the drainage of the sinuses, may lead to infection, but are not of themselves foci of infection. Dr. Emerson's experience, as shown by his case

reports, has been so striking that he rather decries treatment of the ear direct.

There are a certain number of cases of chronic deafness that are benefited by the usual ear treatment. However, I do not think that this treatment can be applied indiscriminately to every case; nor will the removal of diseased tonsils cure every case of chronic deafness any more than it will cure every case of chronic rheumatism.

However, Dr. Emerson has demonstrated most conclusively that without any direct ear treatment, the removal of foci of infection will in many cases restore hearing that had apparently been damaged beyond repair. The society is greatly indebted to Dr. Emerson for presenting this scholarly and timely paper.

DR. FRANCIS P. EMERSON, Boston, Mass.—Dr. Bigelow referred to my rather decrying definite treatment of the ear. I do not wish to take that ground, because treatment of the Eustachian tube is often in order, but what I wanted to over-emphasize was how important it was to try to restore the condition of the conduction apparatus by first getting rid of your infection. In this field, as in every other department of medicine, we need to co-operate with the internist. We must increase the resistance of the host, follow up post-operative infections, study this particular individual's immunity, test them for food, pollen and bacterial reactions, as well as see abnormalities in the nose and infections in the air spaces.

CHANGES IN THE RETINAL VESSELS AND RETINA IN SYSTEMIC DISEASE.*

THOMAS A. WOODRUFF, M. D., C. M., F. A. C. S.
New London, Conn.

Frequently the ophthalmologist is consulted by patients of middle life who have pronounced ocular symptoms, and who on examination show, besides a possible eye strain, which is accountable for many of local symptoms, signs and changes in the background of the eye itself, which are a part of certain morbid conditions of the general system, and can readily be recognized by the ophthalmoscope if a careful and diligent examination is made of the ocular fundus.

*Read before the New London County Medical Society, October, 1920.

The background of the eye is the only region of the body where blood vessels, or more properly speaking, the blood current, can be seen. The vascular walls are so thin that they are practically invisible in the normal state, and it is merely the column of blood as it circulates through its channels that is recognizable. Not until some decided change takes place in the vascular coats are the walls of the blood vessels seen.

The retinal vessels possess no anastomoses, but are terminal vessels, and for this reason the region which depends for its nutrition upon these vessels is liable to show alterations in structure that are a reflection of wide spread vascular degeneration.

The early recognition of these anomalies is important from a clinical stand point. In many instances it is the first indication that vascular degenerative changes are taking place elsewhere, and those seen in the eye are only a part of a morbid process existing in the blood and blood vessels of the brain, heart and kidneys and other portions of the body.

With the ophthalmoscope many a commencing general vascular degeneration can be detected in its incipiency by noting the alterations in retina and retinal circulation. Little importance has been attached by the practitioner of medicine to fundus examinations for the early detection of vascular changes, although the ophthalmologist has for years known that in the background of the eye the first signs of capillary alterations show themselves. A man in apparently good health, exhibiting no symptoms of disease apart from a slight defect in vision, may be the subject of vascular changes of the most serious character. Patients with serious degenerations of this character not uncommonly consult the ophthalmic surgeon, without even suspecting that they are the subjects of a deadly disease which may go on for months, or even years, without setting up symptoms referable to other organs, and consequently without the family physicians being consulted.

The internist should use the ophthalmoscope and familiarize himself with at least the normal appearance of the background of

the eye. Half an hour, now and then, will, after a few months' regular practice, enable any observer to make himself competent to recognize at least the gross changes that sooner or later show themselves in the course of these diseases. Negative evidence is often quite as valuable as positive. Where no signs of capillary alterations are to be found in the retinal arteries, nor changes in the retina itself, the probability is that there are no advancing changes going on in the vessels elsewhere. It is by no means claimed that this is an infallible test, but it is among the most important of the early indications of general disease. When structural changes in this situation are found so slight that a most careful and diligent search is required for their detection, positive conclusions can be formed that these are only a part of a fibrosis more or less extensive in the arteries and capillaries throughout the whole system. (Fig. 1.)

the eye and about the vessels, and when present are conclusive evidence of similar alterations in the vessel walls elsewhere in the body.

Tortuosity of the retinal vessels, although one of the earliest phenomena, is not in itself a positive sign unless confirmed by the presence of other variations from the normal which are generally to be found in the early stages of arterial degeneration. These are alterations in the calibre of the vessels showing inequalities in the width of the blood column at various points in their course. The localized contractions in some instances amount to almost total disappearance of the capillary, which then regains its normal size; this condition occurring over and over again, giving the vessels a beadlike appearance. At the same time the vascular reflex is broader and brighter, and whitish stripes run along the margin of the vessel wall. In the normal condition the walls of the retinal vessels are

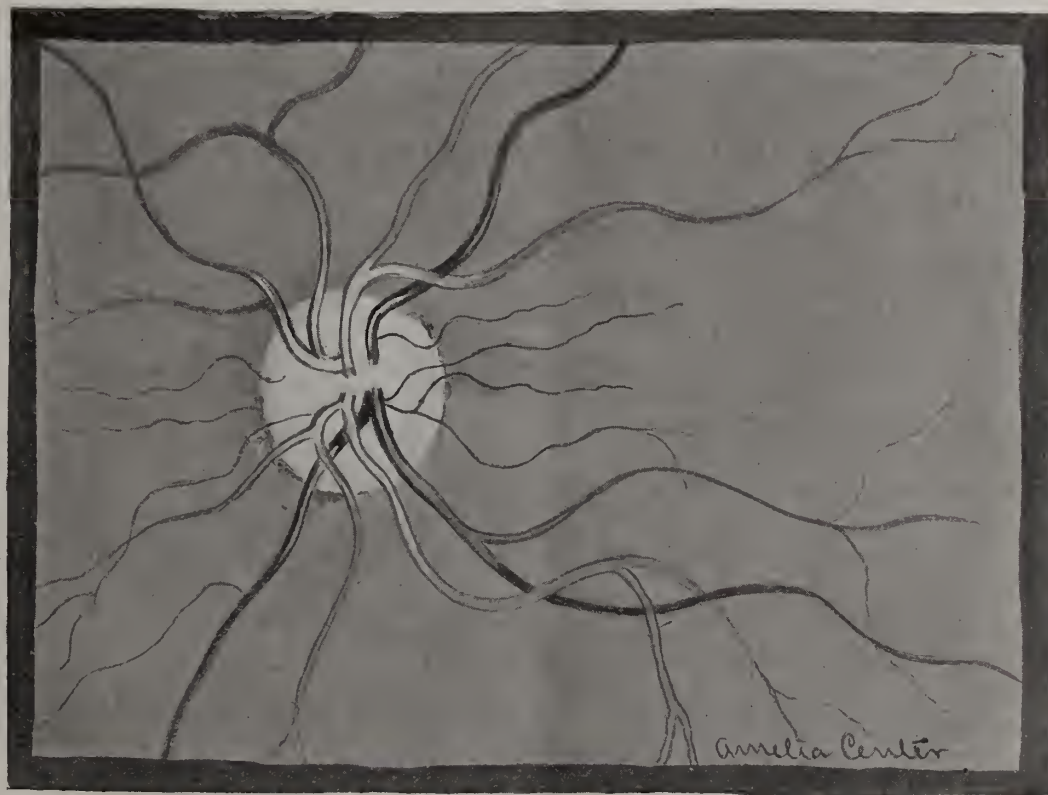


FIG. 1—Representing the normal vascular supply of the retina.

In the earliest stages of vascular degeneration certain changes visible with the ophthalmoscope may be seen in the background of

not visible with the ophthalmoscope, the width of the column of blood indicating in a general way the diameter of the vessel. But

when the vessel walls become thickened from degenerative changes, there occurs a loss of translucency, in which the arteries lose their power of transmitting light, where a vein is crossed by an artery. The vein becomes obscured at this point and the phenomenon is usually accompanied by an appearance of compression and loss of the light streak in the vein on either side of the point of crossing. In the more advanced stages the vein is practically obliterated from the pressure exerted by the artery, and enlargement of the distal end of the venous current is quite apparent. On the other hand, when the vein crosses the artery it appears to hook over that vessel with less signs of compression of its coat.

Edema of the retina from interference with its nutrition occurs sooner or later and is recognized as a grayish haze, which is better seen in the macular region, or along the course of the vessels.

The relation of vascular disease to various morbid conditions in certain organs of the body is well known. The causes that lead up to these changes in the circulation depend upon the absorption into the blood of the toxins given off under diseased conditions in the general system, which, if not checked, have an effect upon the vascular coats that ultimately results in pathological changes, which sooner or later become permanent and produce degenerations in various organs of the body. They are due to the retention in the system of effete substances which act as poisons, their existence depending upon defective action of the excretory organs.

If such excretory organs as the kidneys and liver act indifferently, there is an accumulation of the toxic matter absorbed into the blood stream which produces morbid changes, not only in the vessels of these organs, but more particularly in the general vascular system. Primary arteriosclerosis depends in a great measure on just such a cause.

Arteriosclerosis, in the true sense of the term, is probably never of primary origin, but is secondary to a degeneration which has already existed for some length of time.

The patients whose retinal vessels show these degenerative changes are generally

those who have reached the ages of forty or fifty years, who have led a sedentary life and who are fond of good living. There is, also, a history in most instances of some form of "indigestion" and in many cases there is a distinct history of gout or rheumatism. The heart is frequently hypertrophied from valvular lesions. It is in such cases that the natural functions of the excretory organs are not carried on perfectly. A chronic diffuse nephritis and other conditions involving increased arterial tension may be present. A form of poisoning results from absorption into the blood of the effete matters which are insufficiently eliminated.

Gout, syphilis and alcoholism are associated with and frequently play an important role in the causation of these degenerations. Probably they are, in the majority of instances, the underlying cause of the arterial disease. What effect the poisons have on the blood and the vessel wall is not clearly understood, but the changes cause a high blood pressure from increased resistance to the blood current in the peripheral vessels. This is followed by hypertrophy of the heart, and eventually atheromatous changes in the arteries. As the disease advances in the system and the general arteriosclerosis develops, changes in the retinal vessels may be regarded as merely a part of these vascular alterations that are at the same time taking place elsewhere in the body. These pathological changes may go on for years without giving rise to any untoward symptoms that have an effect upon the patient's ordinary mode of life. It is only when the disease has advanced to the stage in which foci of sclerosis appear in the kidneys, liver and the larger vessels that notice is taken of them, or even a suspicion is entertained that the patient's life is in danger.

There is probably no other disease in which vascular sclerosis plays a more conspicuous part than a typical chronic gout, a disease characterized among other changes by high arterial tension and cardiac hypertrophy. The gouty diathesis predisposes to vascular degeneration of a more or less pronounced type, the presence of which is recognized in retinal changes confined more or less (es-

pecially in the early stages) to certain alterations in the retinal vessels and circulation, though these changes do not differ materially from those which are present in the course of arteriosclerosis, due to other causes. It is well recognized that degeneration of the retinal vessels, and of the retina itself is probably more indicative of chronic gout than any other morbid process. This is probably due to the presence of deleterious matter, which, producing changes in the blood and acting on the coats of the vessels, induces a high arterial tension that is responsible for the alterations in the arterial walls themselves. These same causes bring about sclerotic metamorphoses in the small blood vessels and capillaries. These degenerative changes show themselves in the retina by alterations in the appearance of the blood vessels, which in the early stages, are so slight that they are easily over-looked if a careful examination is not made. (Fig. 2.)

Hemorrhages into the retina not uncommonly occur at some stage of the disease and are the result of a diapedesis or an actual rupture of the vessels from a weakened condition of the vessel wall, probably the result of changes in the composition of the blood and in the coats of the vessels. They are danger signals which serve as suspect notices of the existence of general vascular disease, and a suitable systemic examination should follow.

Hemorrhages may be any size, and vary from a minute point to a large extravasation covering the greater portion of the retina. In number there may be one or many, scattered over the fundus, situated either in the periphery or macular regions alone, or in both situations at the same time, in most cases following the course of the blood vessels, and in many cases covering them. Their shape depends upon the position they occupy in the substance of the retina, being round, oval, or irregular when situated in the outer or



FIG. 2—The vascular changes as seen in arterial degeneration representing the impeded circulation (A) in the veins where crossed by an artery.

inner layers and striated or flame shaped when in the nerve fiber layer of the retina. Sometimes the hemorrhage is situated between the retina and vitreous, usually in the neighborhood of the macular region, and it has a rounded, well defined outline.

Recent bleedings are bright red in color, which in a few cases are absorbed, but more often the bright red color is replaced by the formation of whitish spots of degeneration, which, in time, usually become pigmented, and in many instances, become replaced by masses of dense pigment.

The presence of hemorrhages indicates a weakened condition of the vessel wall from a degeneration of the retinal vessels accompanied by an increase in the arterial pressure, a condition which is likely to exist in case of valvular disease of the heart, in morbid conditions of certain organs of the body, as in chronic Bright's disease, in general blood diseases, such as gout, pernicious anemia, leucocythemia, etc., or in the degenerative changes seen in old age, and which are frequently a forerunner of similar changes existing in the brain, with eventual rupture of a vessel in that organ. Retinal hemorrhages nearly always accompany thrombosis and embolism of the retinal veins and arteries, conditions which frequently depend upon diseases of the heart, kidneys, or blood vessels of the brain, and although occurring more often in elderly people, they are occasionally met with in persons under middle life, and may be the first warning of any disease in these organs.

About fifteen per cent. of all cases of renal and other affections in which albuminous urine is found are uniformly associated with ocular changes. More or less severe in character from slight alterations in the walls of the retinal vessels to the severer degenerations and inflammations of the retina itself. Edema of the lids, especially a temporary swelling of the lower lids in the morning, is one of the earliest prodromata of albuminuria where anasarca is liable to occur. By far the most important eye manifestations, however, are alterations in the optic nerve and retina. These changes may appear in various forms, the most common being a degenerative form in which the changes are confined to the

retina and there is scarcely any alteration in the appearance of the optic nerve head; a hemorrhagic form with many hemorrhages; but slight signs of inflammation; and an inflammatory form in which there is much swelling of the retina and obscuration of the optic nerve head.

All degrees of hyperemia of the optic nerve head, from a simple congestion to a well developed, choked disc, are not uncommon in all forms of Bright's disease. These occur alone or in conjunction with what may be regarded as the characteristic lesion in albuminuria, viz: whitish degenerative patches arranged in stellate fashion about the macula. They are first seen in linear streaks that gradually arrange themselves like the spokes of a wheel around the fovea. Later on, other whitish areas appear in the background and they may coalesce covering the vessels. Associated with these alterations in the retina are eventually seen hemorrhages, usually in and about the optic nerve head.

Retinal changes are met with most frequently in chronic nephritis, especially in the interstitial or contracted form, a disease which is preceded by and depends for its existence largely upon a chronic endarteritis.

Although slight vascular changes in the retina may antedate the appearance of albumin in the urine, they are only present when there is a distinct disturbance of the kidneys. Such changes are the result of the retention of the poisonous substances which the diseased kidneys are powerless to excrete properly.

In some cases no albumin is found in the urine, or only a trace is found after repeated examination and the specific gravity is low. The hemorrhages are usually situated in the nerve fiber layer and have a streaked or flame shaped appearance. When they occur in the other layers they are oval or round and irregular. These hemorrhages may undergo absorption, leaving pigmented areas or whitish spots of atrophy with pigmented borders. Both eyes are affected, although the changes may take place in one eye sometime before they occur in the other.

Prognosis. The significance of these retinal changes and the influence they exert upon

the life of the individual depend largely upon their cause and the progress of the degeneration in other portions of the body. The degenerative process, which so often has an insidious beginning, may have gone on for some time before any abnormalities in the ocular fundus are noticed. Not until gross lesions have shown themselves in the eye can we positively predict a fatal termination. The mere fact that such conditions exist in the retinal vessels does not warrant us in assuming that the disease is going to progress to such a stage as to affect the function of the kidneys and liver, to cause degenerative changes in the brain.

The course of arterial degeneration is usually slow, although exhibiting periods of exacerbation. The patient's ordinary occupation is very little interfered with. There are ordinarily no symptoms of any moment which point to any altered state of the general health. The patient lives his daily life, unconscious of the existence of these phenomena, until some marked symptoms from the occurrence of actual hemorrhages, thrombosis of the retinal vessels, etc., show themselves, and the clinical aspect of the case becomes decidedly changed. When these vascular alterations are recognized and appropriate treatment is instituted early, the progress of the disease may be arrested and the patient's health remain good.

An unfavorable prognosis depends upon the state of the heart and other organs. When the degeneration has so far advanced that the vascular walls are impregnated with a tissue that is foreign to them; and hemorrhages into the retina have occurred, then an arrest of the progress of the disease cannot be hoped for.

Hemorrhages from retinal vessels and capillaries in persons past middle life, should always be looked upon with suspicion; they indicate some degeneration of the general vascular system.

If occurring in old people in whom the existence of an arteriosclerosis is to be suspected, they point to a possible attack of cerebral apoplexy which will likely prove fatal.

In chronic Bright's disease retinal hemorrhages and changes in the retina itself appear as late manifestations of the disease and point to extensive degeneration in the general circulatory apparatus and kidneys, the prognosis in such cases being more favorable than when such complications do not exist. The average duration of life after the appearance of retinal complications is about two years, in ninety per cent. of the cases.

MISCELLANEOUS

ETHER AND LAVENDER.

DESSERTATION ON AGRICULTURE.

POTATOES.

(Synonyms: "Murphy's," "Spuds.")

This cosmic fruit of the soil is essentially a succulent tuber, has in its native state an earthy smell and appearance and when properly prepared, (especially "pared") may become a gastronomic joy. A satisfactory procedure would be to entirely denude the potato, split into thick, longitudinal slices, these to be again divided parallel to the long axis and dropped into a receptacle containing deep and very hot fat.

When thoroughly cooked they may be served with what the French know as "Bifsteak" and taken in allopathic dosage. This when accomplished is apt to produce a sensation of deep content—a ruddy glow comes to the cheek; a delicious sense of languor pervades the physical and mental system; the very thought of splitting wood is so entirely repugnant after a copious ingestion of this combination, that whole wood-piles have been referred to some place where it would easily burn without splitting.

The culture of the potato is productive of both profit and pleasure; too great assiduousness in its cultivation, however, produces a profound disturbance of the dorsal musculature which simulates a condition known to the ancients as "Backus Breakorum," the fear of which disease probably accounts for the great reluctance evinced by most men of taking up its intensive cultivation.

Although not at first apparent, the potato resembles in some respects many physicians; it is inoffensive, makes no protests against its use or

(Continued on Page 18)

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EDITORIALS

THE RHODE ISLAND MEDICAL JOURNAL.

Conscious of the standard of excellence heretofore maintained, the policy of this publication will be but little disturbed. Some slight innovations are meditated in the nature of a query column to which questions may be addressed to the Editor, signed or anonymous, and must reach the Editor's office not later than the 5th of the month preceding the issue of the first succeeding month.

All questions will be referred to an authority indicated by such questions and answered accordingly. Neither the name of the questioner nor the authority will be published. In this column, also will be published any case or clinical material that may be thought of interest, and Fellows of the Society are earnestly requested to report any such to the Editor for publication. Items of personal interest would be most welcome and space will be found to insert items having to do with activities of the physicians of this state, whether it be a visit of the stork, a prank of Cupid, social functions, removals, appointments or any other matter of mutual interest or concern.

If the officers of the various district societies would be willing to assume the congenial task of collecting and reporting these affairs, it would be of interest to their fellows, a help to the JOURNAL, a pleasure to themselves and a most appreciated courtesy to the Editor.

Certain space also will be devoted to medical or other anecdotes and quibs coming under the observation of any contributor who will favor the JOURNAL with such, and published in the hope that it will cheer a leisure moment of some Fellow of the Society who is following the "probe or the dose" too closely for his mental tranquility.

THE MEDICAL LIBRARY BUILDING.

In varied degree most men are self-centered, and it may be that when one's observation is narrowed by some particular walk in life, the impression gains weight that people in this particular walk in life are more self-centered than others, which really means that our mental vision is not always alert to the conditions that surround us. Judgment is therefore, based according to our field of vision and the profession of medicine does not, of itself, broaden the general vista.

Many men make a profession of medicine, more make a business of it; and there are others—but let it pass; we have to do only with the first two and it takes no deep analysis to detect the tendency to slavery of one and unbroken drudgery of the other. And is this all? If so, it is rather a left-handed compliment to our intelligence.

In the physical make-up shall one group of muscles thrive and another perish? It does not seem as if there could be anything more trying than the practice of medicine, whether as a vocation or avocation to one endowed with conscience or humanitarian instincts. We are constantly struggling in an uphill fight with science as an only weapon and that often weak or unrevealed. With all of this to maintain a healthy mental attitude and receptiveness, some diversion is not only essential, but necessary; our work is better, more effective and more cheerfully done.

Untold centuries ago speech grew, and became an agent for the interchange of thought; syntax developed, adding a nicety to expression, and language became an entertainment. Another step; cadence and rhythm came and music was established—all social institutions for the most social of all living things; man. Diversion and sociability are the powerful side partners that relieve the friction in the daily grind; we owe it, therefore, to ourselves and to successful work in these days of stress and bustle to snatch such opportunities as are open before us, but it is feared, the social tendencies in the physician's make-up as far as the Rhode Island Medical Society is concerned do not appear very keenly to respond to opportunities within reach.

We have builded us a building; accessible in location, well equipped, essentially a special library, but not of necessity exclusively so. We hold our Society meetings in it and listen to papers and discussions; we upon occasion lend it to certain organizations engaged in allied work. Some physicians patronize quite extensively the library, but what percentage of the approximately five hundred physicians in Rhode Island make a real use of it? Certain it is that its scientific and literary usage is working no great deterioration to its structure. A building of this pretentiousness, moreover, is entitled to some additional attention.

While the Medical Library building should be more of a scientific center, it should also be made a social center for the physicians of Rhode Island, and should be available for many purposes that the State Society should choose to make it. It is hardly conceivable that the tenets of its charter should be so inelastic as to exclude selected forms of entertainment.

We have many musical men within our ranks, amply qualified to offer a program that without doubt would pack our auditorium to the doors; and if by chance, as the seductive strains were wafted through corridors and halls, some of the hearers should so lack restraint as to indulge in active worship of the god Terpsichore, it should not appear that the law or the grant had been woefully transgressed.

Lectures upon any suitable subject should not only be permitted, but encouraged, even an eve-

ning or two a season of whist should not be particularly taboo.

And further, while it is clearly understood the District Nursing Association is in no sense affiliated with the Rhode Island Medical Society, we cannot overlook certain conditions wherein they course in parallel lines. These capable women, responding any hour in the twenty-four to calls, for pay or without, willingly and without quibble, are a mental splint to those in pain and a help and comfort to the physician. It would be not only a graceful tribute to their attitude and help, but also an entirely appropriate procedure if our building could be made available to their organization, either for business or pleasure, should occasion arise.

SOCIETY MEETINGS

RHODE ISLAND MEDICAL SOCIETY. COUNCIL.

November 29, 1920.

The Council met this date, Dr. Mowry presiding. There were present Drs. Mowry, Chesebro, Day, Gordon, Mathews, Welsh, White, Hoye and Leech.

The Treasurer's Budget was presented by Dr. H. J. Hoye and it was voted to recommend to the House of Delegates the adoption of the same

BUDGET, 1921.

Expenses, Secretary and Treasurer...	\$ 150 00
Interest	144 00
Librarian	1200 00
Janitor	396 00
Gas and electricity	100 00
Fuel	550 00
*Collation	550 00
Books and binding	75 00
Repairs and supplies	250 00
Insurance	15 00
Safe Deposit	6 00
City water	15 00
Telephone	75 00
Incidentals and unforeseen liabilities..	300 00
Rhode Island Medical Journal.....	400 00
	<hr/>
	\$4226 00

*If annual dinner is given.

The Treasurer read a list of members who are in arrears for dues and will be dropped December 15 unless the back dues are paid.

Dr. William R. White presented the following resolution:

Resolved, That Dr. Jesse E. Mowry, Dr. John M. Peters, Dr. Charles H. Leonard, and Dr. George S. Mathews be made a Committee, and that the same be empowered and directed, in behalf of the Rhode Island Medical Society—First, to procure and place in the interior of the Medical Library Building a suitable tablet in honor and memory of Dr. George Dallas Hersey, and his work in upbuilding the Library and promoting its interests;—Second, to obtain a photograph of Dr. Hersey, have it enlarged, framed and hung within the Library Building.

Resolved, That sufficient funds for the execution of these measures be appropriated from the treasury of the Society.

It was voted to recommend to the House of Delegates the adoption of the foregoing resolution.

Adjourned.

J. W. LEECH, M. D., *Secretary*.
November 29, 1920.

HOUSE OF DELEGATES.

The House of Delegates met this day, Dr. J. E. Mowry presiding. The Treasurer's Budget was presented as recommended by the Council and adopted.

BUDGET, 1921

Expenses, Secretary and Treasurer...	\$ 150 00
Interest	144 00
Librarian	1200 00
Janitor	396 00
Gas and electricity	100 00
Fuel	550 00
*Collation	550 00
Books and binding	75 00
Repairs and supplies	250 00
Insurance	15 00
Safe Deposit	6 00
City water	15 00
Telephone	75 00
Incidentals and unforeseen liabilities...	300 00
Rhode Island Medical Journal.....	400 00
	<hr/>
	\$4226 00

*If annual dinner is given.

On motion of Dr. Hammond, seconded by Dr. Phillips, the following resolution, as recommended by the Council, was adopted:

Resolved, That Dr. Jesse E. Mowry, Dr. John M. Peters, Dr. Charles H. Leonard, and Dr. George S. Mathews be made a Committee, and that the same be empowered and directed in behalf of the Rhode Island Medical Society—First, to procure and place in the interior of the Medical Library Building a suitable tablet in honor and memory of Dr. George Dallas Hersey, and his work in upbuilding the Library and promoting its interests; Second, to obtain a photograph of Dr. Hersey, have it enlarged, framed and hung within the Library Building.

Resolved also, That sufficient funds for the execution of these measures be appropriated from the treasury of the Society.

It was voted that the annual dues for the year 1921, be fixed at \$10.

The report of the Chairman of the Committee on Necrology, Dr. Charles H. Leonard, was received and placed on file:

"To the House of Delegates, Rhode Island Medical Society:

"As Chairman of the Committee on Necrology, I beg to report that I have forwarded to the Editor of the RHODE ISLAND MEDICAL JOURNAL obituary notes, prepared by the Committee concerning the deaths that have occurred in the Society since December 1, 1917, namely, for one Honorary member, sixteen Fellows, one non-resident member, and four past Fellows.

"The list is a long one, for the last list published was that in the December number of the JOURNAL in 1917.

"Personally, I may express the hope that opportunity may be found for publishing a Historical Catalogue of the Society, on which much labor has been expended, both by the late Dr. Hersey and myself.

"Respectfully submitted,

"CHARLES H. LEONARD, *Chairman*,
"Necrology Committee."

A communication from the Committee on Public Health Problems, A. M. A., requesting the appointment of a committee from this Society, to co-operate with a committee from the State-Teachers' Association, for the purpose of

promoting better health conditions in public schools, was read by the Secretary. It was voted that the President be empowered to appoint such a committee.

Adjourned.

J. W. LEECH, *Secretary*.

QUARTERLY MEETING. LIBRARY BUILDING.

December 2, 1920.

The regular quarterly meeting of the Rhode Island Medical Society was held in the Medical Library, December 2, 1920, at 4 p. m. The President, Dr. J. E. Mowry, presided. There were present 65 members. The minutes of the September meeting of the Society, of the last meeting of the Council, and of the House of Delegates were read by the Secretary.

The President made the following appointments:

DELEGATES TO STATE SOCIETIES.

Maine—Dr. C. R. Doten, Dr. C. S. Christie.

New Hampshire—Dr. H. B. Sanborn, Dr. A. H. Ruggles.

Vermont—Dr. W. R. White, Dr. J. C. Rutherford.

Massachusetts—Dr. C. W. Skelton, Dr. W. G. Sullivan.

Connecticut—Dr. I. S. Cook, Dr. G. F. Johnson.

Anniversary Chairman—Dr. Frank E. Peckham.

Member at Large of the Board of Trustees of the Rhode Island Medical Society—Dr. Benj. F. Tefft.

Dr. A. H. Miller presented the following resolution:

"*Resolved*, That the Rhode Island Medical Society favors the establishment by the American Medical Association of a section on Anesthesia and recommends that its House of Delegates instruct its representative to the House of Delegates of the American Medical Association, which is to meet in Boston, in June, 1921, to act in accordance with this view."

The foregoing resolution was adopted and referred to its House of Delegates for final action.

The first paper was presented by Dr. W. Russell MacAusland, Boston, on "Infectious Ar-

thritis; Prevention of Deformities." The paper was illustrated by lantern slides. Discussion was opened by Dr. W. E. Preble, Boston.

The second paper of the afternoon was presented by Dr. Frank E. Peckham, Providence, "The Spinal Mechanism in a Dual Role."

"1. A Key to Diagnosis and Treatment.

"2. A Cause of Symptoms."

The paper was based entirely on studies connected with Chronic Arthritis.

After adjournment, a collation was served.

J. W. LEECH, M. D., *Secretary*.

WOONSOCKET DISTRICT SOCIETY.

The Woonsocket District Medical Society met December 2, 1920, at 4:30 p. m., at the office of Dr. C. B. Barry.

Important issues were considered at the meeting.

THOMAS F. BAXTER, M. D., *Secretary*.

HOSPITALS

RHODE ISLAND HOSPITAL.

The annual meeting of the Rhode Island Hospital Staff Association was held December 6, 1920, at 12 m., in the chapel of the Hospital.

Dr. N. Darrell Harvey was re-elected President of the Association and Dr. Norman C. Baker was re-elected Secretary.

Members of the Staff chose terms of service for the ensuing year, and reports of various committees were received and accepted.

NORMAN C. BAKER, M. D., *Secretary*.

ST. JOSEPH'S HOSPITAL.

The Staff of St. Joseph's Hospital held a Staff Conference, December 10, 1920, at 8:45 p. m., in the Out-Patient Building.

GEORGE F. JOHNSON, M. D., *Secretary*.

MEMORIAL HOSPITAL.

The regular monthly meeting of the Staff Association was held December 2, 1920, at 9 p. m. Reports of the clinical work done in the various departments during the past month were presented and discussed.

The adjourned annual meeting of the Corporation was held at the Hospital, December 8, 1920, at 12 m. Reports of the officers were read and officers of the Corporation were elected. After the meeting a luncheon was served.

(Concluded from page 13)

abuse, is absolutely neutral in all public and private questions regarding its individual welfare and final disposition, and is subject to dry rot.—A friend to obesity and a bane to scurvy, and in the last two or three years particularly, has proven to be an appreciated friend and fireside companion.

HISTORICAL NOTE.

The potato was first introduced into England in the 16th Century by a man by the name of Walter Riley, or some such name, (Sein Fein affiliations not proven). He was a great friend of a certain Elizabeth Tudor, who had the job of bossing England for a time. It seems that when she was walking one day, and coming to a puddle, was unable to cross, this man, Riley (or some such name) let her walk across on his clothes, although history is somewhat vague as to whether he was in 'em at the time. He was a soldier by reputation, a social favorite by fate and was the only man in three counties that owned a tooth-brush or had taken the Keeley cure. He must have been afflicted with exophthalmos, however, as he subsequently underwent a radical operation for thyroid, which was so complete as to necessitate the removal of everything above the clavicle. This so abbreviated his stature that he probably failed to pass the draft, as we hear nothing of his military activities afterward.

Riley (or some such name) at the same time brought to England a dried weed called Tub-backer, which is still used somewhat generally by a certain low persons, the process being to burn the stuff in a receptacle fitted with a reed or stem which is placed in the mouth and the smoke subjected to a series of aborted inhalations.

"Mrs. Casey," said the doctor, "I see your husband is pretty sick; now at 2 o'clock you give him as much of this powder as will lay on a dime. I will see him again to-night."

(Same day, 6 p. m.) "I am concerned about Patrick, Mrs. Casey, did you give that powder as I directed?" "I did, sor, but I didn't have a dime, so I gave him enough to cover two foives."

"Miranda," said Mrs. Newly-Wed, "that hash that you served to-day was very nice. How did you make it?" "Make it, Chile? Hash isn't made, Honey, it accumulates."

THE RHODE ISLAND MEDICAL JOURNAL

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ORIGINAL ARTICLES

THE SPINAL MECHANISM IN A DUAL ROLE.*

- (1. A KEY TO DIAGNOSIS AND TREATMENT.)
- (2. A CAUSE OF SYMPTOMS.)

FRANK E. PECKHAM, M. D., F. A. C. S.,
Providence, R. I.

In the first place it will be necessary to describe a viewpoint of disease. For a few years now I have talked before some of the smaller medical clubs about the importance of "functions" of the different organs as well as the methods of stimulating those functions. During the last year a number of writers have emphasized the importance of "function," especially in chronic diseases. It is not a fantastic idea and is positively essential if any success at all is to attend treatment. All I have learned along these lines has been brought out by closely observing my cases of arthritis. In studying such patients, the joint symptoms are always in evidence, but these are *only symptoms* and not the basic trouble.

The first thing which forced itself on my attention years ago was the fact that almost all of these patients had some "stomach trouble" and great numbers of them were constipated. With increasing knowledge based upon these studies one is lead to believe that if the functions of the various organs can be restored or even approximately restored, the patient will at least be relieved in *any* chronic disease including arthritis. The functions are probably first interfered with by the introduction of improper food products, followed by faulty assimilation. As this paper is not dealing directly with the food question, that part of the subject may be passed with the general statement that, foods may be divided into two classes, those with the acid forming base and those with the alkaline forming base. People in general eat too much of the acid base

with too little of the alkaline base. This, of course, should be corrected. Proper food is essential and then of equal importance; the physiological machinery must be stimulated to do its work properly. It is in this stimulation that the spinal mechanism may be made use of in producing results which at times are truly wonderful.

The spinal cord is the center of the physiological machinery, where the nerve cells are located and all of the various organs are very intimately connected by means of the nerve trunks. Any disturbance in the *functions* of the organs at the peripheral end, results in a message being sent to the central cell and then transmitted to the brain. In other words, impulses are transmitted along the nerve trunks from the periphery to the center. Also it is just as true that impulses may be sent from the center to the periphery. The nature of this impulse has been much discussed and recently Steinach (Medical Record, July 3, 1920) has made a suggestion that the nerve impulse is neither electrical nor conductive like electricity, because under such an hypothesis the nerve trunk is not a good conductor. On approaching some of the neurones, or nerve cell stations, the insulation or nerve sheath is lacking, therefore the impulse if conductive would be lost or dissipated at the point of defective insulation. But this method of wiring would work all right if the impulse were vibratory. Therefore the author suggests the vibratory theory for the nerve impulse, as opposed to the conductive theory. This theory fits in so accurately with the work to be described that it seems almost like a demonstration.

If an organ or organs are not functioning properly there is usually a demonstrable sign at the spinal or central end of the nerve trunk. This sign is a tenderness elicited by percussion or still more accurately by pressure with the

* Read before the Rhode Island Medical Society, December 25, 1920.

hard ball of the vibrator over the corresponding nerve center. For example, if the heart and stomach are at fault the vibrator will elicit tenderness at the level of the 4th and 5th dorsal vertebrae. Every organ and every physiological mechanism has its own nerve center. By testing out these nerve centers it often may be possible to describe the symptoms to the patient without asking a single question.

At this point I wish to emphasize the fact that the skin is an organ just as the heart, liver or kidney are organs. It is because this fact is not taken into account that so many skin diseases are treated and treated, but not cured. In one large military hospital so many skin affections were easily cured by the various physical modalities that the dermatological department nearly lost all of its business.

Just a word regarding the focal infections. Abscesses and collections of pus in various parts of the body, including the teeth and tonsils, are a constant source of trouble. It is certainly a fact that at times the removal of tonsils or the extraction of apical abscesses seem to put an end to the whole arthritic trouble. But these foci are more often only dependent upon faulty nutrition or faulty physiology and represent trouble midway between the real cause and the end results or arthritis. Anyway, the increasing number of patients now presenting themselves for treatment who have had all these things done with perhaps temporary relief, but with a slow and sure return of symptoms, lead to the belief that the essential cause had not been touched. It is largely in the cases that have not been helped by all of these various methods that an intensive study has demonstrated possibilities in results which have been much improved over former attempts.

There are various measures in physical therapeutics but in this paper only mechanical vibration will be stressed. As stated before, there are nerve cell centers up and down the spinal cord, for all of the organs and mechanisms which go to make up the physiological machines. The functions of the various organs may be directly stimulated by vibratory pressure over the proper nerve centers. I may be wrong but I think this takes place through the sympathetic nervous system. Anyway, it positively takes

place. When vibratory pressure is made, a vibratory impulse is sent over the nerve trunk from the central station towards the periphery and this impulse is a stimulus to the function of the organ involved, i. e., heart, liver, intestines, etc. In arthritis a large percentage of cases is due to the faulty physiological functions of some of these organs. The stimulation directly applied, as before described, results in an improvement in the behavior of the organ. Many cases of constipation respond to such stimulation applied with the hard ball vibratode at the level of the 12th dorsal vertebra and with the disc vibratode over the tip of the coccyx. The liver is an extremely important organ and may be stimulated by vibratory pressure at the level of the 6th, 7th, and 8th dorsal vertebrae as well as by direct application of the disc vibratode over the front and back surfaces. The pancreas is another important organ to stimulate so that its alkaline secretion may be made to flow more abundantly.

From a close observation of many cases of arthritis I think the heart is *usually* the first organ affected by the absorption of toxins. It becomes at first slightly dilated and later flabby from loss of tonicity when a considerable degree of dilation may exist. A remarkable case of flabby and dilated heart with its train of symptoms might be interesting enough to report.

A woman had been troubled with her heart for years. Examination revealed no murmurs, but the percussion area was certainly enlarged. The ankles and legs were swollen to about twice their normal size. Dyspnoea existed in a very aggravated form. She could walk only a few steps without starting up a paroxysm of coughing which might last for hours. She had not slept in bed for five or six years. The nights were passed sitting in a chair leaning over a table. The cough would continue for hours and enormous quantities of thick, sticky mucous would be raised every night. She had been under the care of a number of physicians for a number of years, but under drug treatment had grown progressively worse until her condition was pitiable.

The treatment now begun consisted of vibratory pressure with the hard ball vibratode over the proper spinal nerve centers for the heart,

liver and intestines. The disc vibratode was then used over the surface area, both posterior and anterior, and also over the surface of the heart. Improvement began at once. The swelling of the legs and ankles progressively diminished until a normal condition existed. The cardiac asthma and bronchial condition improved at the same time with continuous diminution of mucous formation. Treatment was stopped too soon on account of the necessity of the patient taking care of another member of the family. The treatment was continued for a number of months with attendance three times weekly when she was sleeping "in bed" four to five hours every night, was doing her own work, going up and down stairs, cooking, etc.

Many cases have stomach trouble with poor functions of the liver, pancreas and intestines. An illustrative case was that of a young man who with great regularity every month has a very severe attack as follows:—at first there would be headache and nausea. Simultaneously there would appear a swelling over the shin of one leg. The headache would become very severe with inability to eat food. The stomach area and abdomen would be tense and painful, the area on the leg would be swollen and painful. This condition would last from beginning to end about two weeks out of every month. He was sent to me in the middle of an attack, it being considered that there might be some disease of the tibia. An X-ray, however, showed a normal bone. This condition had existed for a number of years. He first came right in the middle of an attack. The abdomen was very tense and hard. The leg area looked purple and angry. The face was red and the eyes very congested. Here again many men had used drugs for a number of years but the condition had not been ameliorated at all. Thinking that the whole thing might be toxic, treatment was begun at the end of the attack and consisted of vibratory pressure with the hard ball vibratode over the centers for the heart, stomach, liver, gall bladder and intestines. The disc vibratode was then applied over the surface areas of liver and intestines. When the next attack was due there was only a suspicion of it and after that he worked every day and at the end of three months ceased treatment *apparently* all right. It has been impossible to trace him since, but the

immediate effect of treatment was almost unbelievable.

A number of similar cases might be cited, but these two are sufficient to demonstrate that the functions of the various organs may be directly stimulated.

In arthritis it goes without saying that all foci of infection should be cleared out at once by appropriate measures, but it is evident from my experience that this does not end the matter. In many cases, foci can not be located, so that with the exceptions noted, treatment, to my mind, consists of stimulating the various organs to function properly. There are a number of methods which will accomplish this, but vibration as has been demonstrated, is an all-important one. In times gone by we have heard about the ptoses of the various organs, i. e., intestines, stomach, etc. By stimulating the proper nerve centers, the tonicity of the musculatures and ligaments of these organs may be restored so that position and function return to normal or approximately normal.

Another interesting observation is concerning the patients who have been tested for protein sensitization for the different food products. Some of them have responded to a few and some to many. Then the rule is to exclude all of these things which produced a reaction. The result is that sometimes there is hardly anything left for the patient to eat. It would seem logical to consider this a question of physiology and resistance. A patient gets below physiological par when there begins to exist a sensitization to one or many proteins. In consequence, articles of food are excluded until strength is reduced and often life seems hardly worth living. Under these conditions the logical thing is to raise the physiological resistance so that the protein sensitization will gradually disappear and forbidden food once more indulged in. There is undoubtedly more than one way to do this but it is certain that vibration, with the hard ball vibratode, over the proper nerve centers will accomplish it in a great many cases. A patient last summer had been on an extremely restricted diet for a long time. The improvement under treatment was continuous and one day she came in saying she had eaten "all there was in sight" at a Rocky Point (shore) dinner and was feeling fine. A

number of these cases might be cited, but one illustrates the principle of the treatment and the possible results.

This method of treatment has been developed in studying the arthritis cases, but it is now done much more accurately than formerly. The type of patient has to be studied, the temperament has to be taken into account, as in these ways one comes to know almost intuitively how much pressure to make and how long to hold the pressure upon the various centers. The whole idea is one of stimulation and it is highly important to do enough and yet not overdo. With the use of such physical measures, combined with diet in the way indicated above, more cases of arthritis are being put on a stable foundation than ever before.

The second part of this paper has to do with the bony canal made up of a pile of vertebrae, the nerve trunks passing out between these bodies, the ligaments and the connective tissue structure which surrounds the spine as a whole. With the spine thus constructed, a healthy baby has a perfectly flexible spine. As adult and especially middle life is reached, this flexibility is often diminished. The reasons are that no especial effort is made to retain it and another potent reason is on account of the diet. Many of the foods eaten are of the acid forming bases and often entirely devoid of the mineral salts. Potassium especially is important in flexibility and then when one salt is omitted many, if not most of the others, are also a minus quantity. Another phenomenon which takes place is a shortening or settling of the whole spinal column. In middle life most, if not all spines, are shorter than in young adult life. Under these conditions the ligaments and the surrounding connective tissue lose their elasticity or rather tonicity, become thickened and press and pull on the outgoing nerve trunks. This thickening may increase so that the limitation to flexibility becomes very great with a pretty rigid spine. With the settling of the spine, which has also taken place there may be in severe cases a great amount of mechanical pressure or pulling on the nerve trunks. This produces definite symptoms. A moderate amount of pressure will irritate peripheral organs and a great amount may produce inhibition with its sequence of symptoms.

Beginning at the upper end of the spine, with the condition known as spasmodic torticollis, neither mechanical treatment nor surgery has made very much if any impression. Basing treatment on conditions as above described, the pressure has been sufficiently relieved so that complete cessation of muscle spasm has resulted. Going down the spine to the 4th and 5th dorsal vertebrae, a slight thickening might result in irritation of the nerve causing an irritable and irregular heart. A greater amount would interfere with the nerve impulse so that the heart muscle would lose its tonicity and become more or less dilated. Any organ may have its nerve connection with the spine thus interfered with. This may and certainly does happen in connection with the prostate gland. The early symptoms due to beginning thickening with consequent pressure on the nerve trunk produces irritability with increased frequency of micturition, etc. At another level of the spinal cord, the pressure may occur where it interferes with the nerve supply of the musculature of the legs. In the earlier stages there exists irritability. The patella reflexes are exaggerated, ankle clonus is present, the gait may be unsteady in walking, the patient may or may not sway when standing with the eyes closed. Still later as the pressure increases, the symptoms may change to absence of some of the reflexes giving one the impression of the possibility of locomotor ataxia. Under the conditions thus described the Wasserman should be negative. It is a now specific condition.

The treatment is to dissipate the thickening in the ligaments and connective tissue structures surrounding the spine, to restore flexibility and to restore motion not only in the long arc motions as in the lateral bendings, but especially in rotation. In proportion as this is accomplished the symptoms will disappear. The treatment consists of the various physiotherapeutic measures. Diathermy with the large machine is an essential. Vibration and gymnastic work with the spine are also of great importance. Successful cases could be reported, but it was of more interest to describe the causal condition. I can not find that anything has been written about it. They are real conditions and treatment applied along the lines suggested are producing results.

ANNUAL ADDRESS OF THE PRESIDENT
OF THE PROVIDENCE MEDICAL
ASSOCIATION.

Providence, R. I.

Dennett L. Richardson, M. D.,

FUTURE TREATMENT OF DISEASE.*

Every man, woman and child is entitled to prompt and skillful medical service whenever they are ill. This principle is not only humanitarian, but is based on sound economic policy. Every country can afford sufficient funds to cover the expense necessary for the prevention of disease and the treatment of the sick. A negative statement makes it more emphatic. No country can afford not to supply sufficient funds for the prevention of disease and the treatment of the sick. I do not mean by this statement to imply that a nation might find this financial burden greater than the economic loss due to disease. But it is true that no money should be spared for essential and well-developed methods of prevention and for the sane, proved methods of the treatment of disease.

The money spent on patent medicines and charlatans is enormous. If only part of this could be turned into the proper channels a great good would be accomplished.

The attitude adopted by so many that the Lord permits disease to flourish as punishment for misdeeds of the human race is denied by every fundamental Christian teaching. This belief is based on ignorance and nurtured by inertia "what is" should not be, "what was" nor "what will be." The human race probably will never solve the mysteries of existence, but this should not deter us from continued endeavor to push back the curtain of the unknown, not merely to gratify curiosity, but to lay bare facts and principles which will be of practical value. We are given our brains and senses and the unlimited resources of nature to make life a pleasure rather than a thing to be endured.

Excluding the bare necessities of food, drink and clothing, good health is the most important factor in human happiness. Be a family ever so poor in the many things which contribute to happiness, good health of its members will nearly always make them contented. What father or mother would not spend their last

dollar to bring back to life and health any of their children. And he can afford to, too, if he gets results. Any nation can and should adopt the same attitude toward all its people as does the father toward a family. It should go the limit of expense for measures which produce results.

The great danger, however, is that the money may be squandered on useless measures and find its way into the pockets of men who are unscrupulous or poorly trained. It is just as wrong for a health official to advise the expenditure of large sums of money on any measure which is not of proved value as it would be to advise the public to use some quack remedy. Whatever applies to public measures applies equally well to the treatment of the individual.

The essential features of the fight against disease are research, prevention, accurate diagnosis, efficient curative and symptomatic treatment. I mention research first, for there are so many vital things which we as yet do not know. The program calls for money and men trained, energetic and honest.

The economic questions in this country will not eventually be any stumbling block when people have been properly educated. We spend a billion or two on our Army and Navy every year. Did you ever stop to think what that amount of money wisely spent every year would mean to health, happiness and commercial prosperity of this country? But the time will come when such sums would not cause any more stir when appropriated for health purposes than it does when set aside for the Army and Navy to-day. The public only asks to be convinced, with regard to such matters. The people will never hesitate to finance every good measure. You note this attitude among large business men who are doing so much for the health of their employes, not always with any humanitarian spirit, rather because it pays. The national legislators should profit by this experience and take more interest in health matters.

The large cities have seen the benefit of public health measures and are spending much money on them. The result has been that the

* Read before the Providence Medical Association, January 3, 1921.

cities, where naturally you would expect the highest mortality, there is really the lowest. The small cities, towns and rural communities have as yet not been aroused or do not yet see how the work can be done within their resources. No community is spending all that it can afford even on well tried measures.

The economics phase surely is no serious obstacle. The real problem is how to educate a high grade of men and women, distribute them properly, maintain honest effort and continued progressiveness.

At this moment there are probably enough physicians in the country to carry out this program provided they were all well trained, properly organized, distributed and the whole time of each one fully utilized. After years of preparation it is a great waste for a well-trained physician to sit idle many hours each day waiting for practice. It is perfectly proper that each man should pass through a period of trial before he obtains public recognition, but all his spare time should be devoted to practice in hospitals, dispensaries and other public institutions, with or without pay. He begins at once full usefulness under the direction of more experienced men. The community benefits, and he benefits by keeping fresh his knowledge and skill and the opportunity to still further perfect himself.

The number of medical students now training is about two-thirds the number in the medical schools of the United States in 1908. We are deeply indebted to the Carnegie Foundation for its publicity work and attempts at standardization of schools. However, there is much yet to be done, there are yet too many inferior schools.

But graduates of medical schools are not qualified to practice medicine without hospital experience. There was a time when there were not enough hospital appointments to go around, but with the remarkable expansion in hospital construction during the last fifteen years this is no longer true. One, or better, two years, should be required in well-recognized hospital before a license should be issued. Even specialists should be required to have some general experience before taking up a hospital internship for special work. They are bound to be more successful and fall into fewer errors than the less experienced man.

The hospitals of the United States have recently been graded by the College of Surgeons. The prime object of this action has been to provide the public with better treatment, but has also another purpose namely to provide for better training of internes.

When medical schools have been further weeded out and improved, and hospitals standardized, state boards will gladly give up examination of candidates, accepting a national standard.

Medical education should aim first of all to turn out well-balanced general practitioners. The school curricula should be arranged with each department sufficiently well qualified to teach its subject. Some very excellent schools are weak in certain departments.

There is also a tendency for teachers interested in research to spend too much time upon new methods which are still experimental. What is needed is more class work, and systematic bed-side teaching to drive home well-established symptoms and signs of disease, together with plenty of practical laboratory work of all kinds. Diagnosis is the essential step in treatment and too much stress can not be laid upon it. Students have too much to learn to have their time filled with teachings of doubtful nature.

There has grown up an antipathy to general practice or internal medicine on the part of the younger men. They all want to be surgeons or specialists because there is more money in it and the hours are not so long. Perhaps also the general practitioner is looked down upon slightly. The truth is that the man in general practice needs to be the best trained of all and the best men should enter the field of internal medicine. His responsibility is far greater for he is called to see all kinds of conditions and on his ability to recognize disease early depends the successful outcome. It is unfortunate that the general practitioner is not receiving his share of income. Men with a large practice make money too often at the expense of their patients. Not enough time is given to each patient. Surely the fees for the first home or office visit should be larger than the second visits, and this would make it possible for the physician to give sufficient time to at least one careful examination.

There are too many surgeons. The doctor of medicine should not qualify a man to do surgery or practice a speciality. A certain amount of actual experience should be required of every surgeon or specialist, and this should be indicated by a special degree so that the public may more intelligently select competent men. Too much stress cannot be placed on the value to the country of physicians who are real diagnosticians, who confine themselves to internal medicine, so-called, and do only very minor surgery. Patients would be saved the spectacle of going from one specialist to another, each of whom may find some abnormality, none of which have anything whatever to do with what the man is suffering from.

The physician now has at his elbow assistants, such as nurses, technicians of many kinds, which save his valuable time and who can be trained to do certain things well, at less expense to the public.

Given an adequate and efficient medical service, how is it to reach all the people? This question is giving more worry to public health officials than any other. There are three phases of this problem which should be considered separately, namely, prevention, research and the treatment of the individual patient.

No one will question the value of preventive medicine. Already we can see the results in the control of the diminution of such diseases as typhoid fever, small pox, typhus fever, yellow fever, malaria, etc. Methods of control are pretty well established for several other diseases on which expenditure of much money is advisable. To be sure, we are much in ignorance of the control and reduction of many other diseases, but that in no way militates against carrying out efficiently measures which are of proved value. The execution of preventive measures should be carried out by a staff, trained, efficient and honest, who are paid by the public either from national, state or local resources, or by all three in conjunction. It is purely a public problem. The health officials should be backed up by sufficient laws and what is perhaps more important, assisted and encouraged by men and women who are educated to the value of proper health regulations. Laws can be side-stepped many times, but results are certain when the public as a whole will back up health officials.

Only a beginning has been made in our knowledge of the modes of transmission of diseases, how they are to be controlled, and how they are to be treated individually. More large research laboratories like the Rockefeller Institute should be established by public and private agencies and research should be encouraged in every public health hospital and private laboratory. These laboratories should be linked up with hospitals, large or small, and of a character to furnish abundant material for research work. But research is not confined to laboratories. There should be areas in the country where theoretical measures can be carried out under the direction of national or state agencies. These areas need not be fixed areas, but ones which furnish the disease in such quantity that the results of preventive measures will be an object lesson to the rest of the country. A piece of such intensive work which is being carried out at Framingham, Massachusetts, is an example. Some of the proposed methods will be failures, but they are none the less valuable in preventing their repetition in many parts of the country, which is an economic saving.

Undoubtedly the greatest problem is the treatment of individual patients. It is the most expensive part of the problem and hardest to organize efficiently. There are two phases of treatment of every patient, namely, the symptomatic and curative. If a man has pain he wants and usually needs to be relieved of that pain. He is not satisfied with a learned discussion of his disease. He wants relief. Perhaps if physicians were a little more thoughtful in this matter of prescribing drugs, applications, apparatus, etc., quack remedies would not be quite so much in vogue.

The great object, however, around which all symptomatic treatment should centre is, first, accurate diagnosis and specific measures.

In recent years surgery has made the greatest strides in the real cure of disease and stand next to preventive measures as the greatest agency in conserving human life.

For non-surgical conditions we have a few specific remedies, such as diphtheria antitoxin, salvarsan, etc. This is the field which opens up the greatest possibilities to the research worker at the present time.

The family physician has been and should be a very large factor in individual treatment. To

obtain the best results he should practice only among a class of patients who are able to pay sufficient fees so that he can afford to give each patient as much attention as he needs. The practice of seeing a large number of patients during one office hour is wrong. It hurts the physician who does it and the results are too often unsatisfactory and disastrous for the patient.

There have grown up so many auxiliary methods, particularly in the diagnosis of disease, that the average man can ill afford such equipment. Laboratory examination, and X-ray facilities should be available for every physician, whether his patient is able to pay full fees or not.

But what of the great mass of the population who are not able to pay for treatment, except occasionally, without great sacrifice or not at all. Several European countries have tried sickness insurance, by which all persons under certain earning capacity are assured of medical treatment. In England it is unsatisfactory as now administered. The panel or Government physicians have been given more work than they can do well. Spain has for a long time had publicly paid physicians, but the system has degenerated until the medical service in many parts of Spain is very inadequate. Germany has had health insurance for many years and, while it has been conducted rather efficiently, it is not ideal.

There is much talk of introducing health insurance into this country which will fully provide for medical treatment and partially supply lost wages. It is quite generally agreed, however, that insurance and the treatment of disease should be divorced. Insurance may well be used to apply and to meet wage losses on fixed bases.

Much is being written about state medicine, which means that the majority of people will be insured treatment by physicians employed by the state. Surely it is too big a problem to be decided at once. We have had many examples of non-efficiency of government agencies and we should go slow in turning over to them the treatment of disease, with all the possibilities of political intrigue, bureaucratic red tape, etc. The logical centres where the treatment of such patients should be carried on should be existing hospitals and dispensaries and the establish-

ment of new ones, all subsidized by the state, if necessary. There are thousands of hospitals in this country which have taken years to be established and which are for the most part supported by the best element in the community and conducted by the best physicians. It would be a great mistake to disturb them or have them taken over directly by the state and manned perhaps by men many of whom would be appointed, perhaps, by political influence, regardless of ability and character.

Such hospital and dispensaries should be enlarged if necessary and multiplied. The dispensaries should be taken to the people so far as feasible, for the carfare and loss of time may result in patients not receiving treatment when they should. These institutions should be centres from which patients may be treated in their homes when advisable, and when they are unable to go to the hospital. This is Cabot's idea, of using the hospitals as the centres of treatment. It is logical and feasible and offers the best solution of the whole problem. Some of the staff should be full-time men paid by the hospital, which receives its subsidy from the state or national treasury, supplemented by charitable gifts.

This utilization of existing institutions, so far as possible will save much money to the country. They are provided with modern appliances and patients treated in hospital dispensaries are more liable to, better investigation than the ordinary patient treated by the general practitioner because of these facilities. These foundation stones should not be torn up, but supplemented, aided, enlarged to meet the present-day problems.

Taking a page from the lesson of the success of dispensary treatment, group practice among private physicians is being tried and seems to be a logical move which will better medical service.

It behooves physicians to take more interest in public health matters. They must see to it that medical education is placed on a higher plane and help mould the medical service into its proper shape, so that the public will never hesitate to give medical men the credit that is due them and be willing to pay for what that service costs. Charlatans will then have little chance to operate. Unless physicians show more active interest,

legislation may be passed which will be harmful to them personally and not for the good of ideal medical service.

I wish to express to you my deep appreciation of the honor conferred upon me by electing me your President. It was with much trepidation that I undertook my duties. While it has been a great responsibility, I wish to acknowledge the great help which you have given to me by your suggestions and co-operation, and by this my burden has been lightened.

THE HEART AND ITS RELATION TO THE MENTAL STATE.*

By "A Country Doctor" in Rhode Island.

"One effect of the prolonged strain, according to physicians, has been a sharp increase in the number of patients admitted to insane asylums, and also an increase in heart disease. It also has resulted in the development of a curious form of goitre among adults, especially women, and St. Vitus Dance among children.

Thus quotes the Providence Daily Journal of Wednesday, December 1, 1920 from the Associated Press, and further states, "the panic of the people is so intense, that they are reluctant to discuss the happenings, and, when they can be induced to talk, they speak in whispers."

Such is the graphic pen picture, that the daily press presents to us, of a fright stricken people, closely allied to us by the ties of kindred. Those people whose temperament is like ours, whose daily life is ordered as is ours, and who are daily bearing, as we bear the "thousand ills that flesh is heir to." There, in that affrighted land, the shattering of the nervous system is driving unstable minds tottering from their foundations, insanity is increasing, and many now are forced to enter an asylum ward, who in a land not so convulsed by fratricides, would go on for years in the even tenor of their ways.

*This paper was inspired by an editorial which appeared in the November issue of the Rhode Island Journal, entitled "An Editor's Dream." Although modestly appearing under the nom-de-plume of "A Country Doctor," his large and varied experience entitles his opinions to the respect of all the profession in this state. In a letter accompanying the paper the author states that it was written under stress and interrupted by many calls upon his time. However, he says, "I send it to you for what it is worth." This is exactly the sort of an article we knew could be written by "A Country Doctor," but we hardly dared to hope that we might receive it. Ed.

There go about the stricken children converted into contorted, grotesque caricatures of the human race, whose tortured nerves are convulsed by a disease of the nervous system, that was likened to the dancing mania of the 14th century, and whose only cure could be effected by the intercession of their patron saint! There are found the women, whose defective non-iodized thyroids made them pelican pouched, with throbbing arteries and bulging eyes, and upon whose proper glandular secretion hangs the destiny of future races of men. Their fountains of youth are drying up by the blighting influences of fright!

Men, women and children, blanched and dumb, gesticulating with doubtful fingers and nodding heads, seeking to ease their vocal cords that are shrivelled and dry from the aphonia of fear.

The conversion of the above quoted lines into medical diagnosis, enables me as a physician, to believe there will be an appalling increase in diseases of the nervous system, due to the effect of agitation upon the heart, of those people who may seek an asylum on our shores, and transmit to future generations the effects of prolonged cardiac shocks.

"After my death, the word Calais will be found written upon my heart," exclaimed in anguish an English queen, upon hearing of the defeat of her forces before the walls of the fortress, and the loss of the French seaport city. Not in the pineal gland, as thought by the ancient physicians, was found the "seat of the soul," but rather in the heart, whose every pulsation is governed by the emotions of sorrow, fear or joy, and from such exclamations as these, "the heart bowed down," "my bleeding heart," "my broken heart," "create in me a clean heart," was it finally concluded, that therein abideth the soul of man; and the influence of the heart upon the emotions and the mental state of a people is clearly manifested to-day, when in triumph, symbolic of victory, is seen, borne in sacred procession, the embalmed heart of a national hero, linked with one whose name and forbears are unknown. Both hearts were animated with the same noble impulse, to give even their lives that others might live.

That the vicissitudes of life have a marked influence upon the heart, there is no doubt. "My heart was in my mouth," says the frightened

one, and "my heart stopped beating," said another after some narrow escape from bodily injury. All the shocks we receive, all the thrills of joy, all the anguish of sorrow and disappointment, all the venomous anger of hatred or revenge, are in a great measure reflected upon the heart.

Is the blush on the cheek of the maid, the only tell-tale that shows the effect of joy upon the nervous system? Watch the bounding arteries! Feel the quickened impulse upon their soft elastic walls, racing the blood to the minutest arterioles, so that they all may share in the throb of pleasure.

Does the stony, indifferent stare of the criminal when brought before you convince you that he is not guilty? Trace his radials, and hardened criminal that he is, somewhere an emotion is telegraphing to his heart, that all is not well, and the acceleration of its beat is perceptible. It is fear that stimulates.

Go to the bedside of the young primipara, tossing in dread of the ordeal before her, assailed by doubts and fears, and watch the change that comes with your presence. Watch the tumultuous throbbing pulse slow down after she grasps your hand in faith! Do not give all of the credit to the glittering instruments that you ostentatiously rattle out of your obstetric bag, nor to the brilliant colored tablets in your medicine case of whose composition you know nothing only by hearsay. Think not that it is the wizardry of "dige" this or "digi" that, that you have given her. No. Do not deprive your personality of some credit. The family did not engage you as a pilot to "stop the storm" but to bring the patient safely through the dark sea of travail, unto the joyful haven of triumphant motherhood. Your patient realizes this, and her heart has been calmed by confidence.

These are but pictures of cases whose heart beats are affected by the normal emotions of joy and of fear, and they differ somewhat from those cases whose mental state is aggravated, if not entirely caused, by diseases of the heart.

We have been greatly interested in those cases that have shown gross lesions of the heart, on account of the mental condition that accompanies them. We have characterized such cases, as we will describe, as cases of cardiac mania. Hallucinations of sight and hearing, with delu-

sions of identity are marked in these cases, and their condition, as they strive and succeed, in rising from their beds, under the impulse of these delusions, is akin to the symptoms of the delirium of the intoxicated. Noisy and muttering, they strike away the hand that is to feed them, and with grasping breath and heaving sides, they struggle with imaginary foes. Their limbs, bodies and faces show bruises from striking against the bedsides. The sluggish and fast choking arteries and veins, refusing to clear the cutaneous circulation, thereby, leaving behind the oft criticised ecchymoses that is taleful of abusive treatment to dying tissue, and whose appearance is so dreaded by the conscientious nurse, particularly so, if the case be one of charity, or in a hospital.

The complete change of mentality of patients suffering from diseases of the heart, is highly interesting, not only to the physician, but to the families and legal advisers of these patients. This should be well weighed and considered, when wills are to be made, and property disposed of, ever bearing in mind the possibility, that in some centres of the brain, arterio sclerosis may be advanced to such a degree, that it might result in inhibition of continued logical thought and reason.

Let us glance over the notes of case No. 1. "P. A. D. Female. Age 76 years. Occupation, housewife." Diagnosis when first seen by the physician, March 25, 1915, "Failing Heart caused by Age." Family history has no bearing on the case so far as known, except that "husband died of heart failure at 67 years." The past history states "pneumonia when she was a girl." Present history: "Two weeks ago the woman states, she noticed that she was getting short of breath, spots before her eyes, and her feet swollen a little." Physical examination shows: "Pupils equal, large. Face drawn, feet and legs swollen, chest shows moist rales at both bases." Circulation: "Pulse 80, very weak. Pulmonic second sound accentuated, murmur systolic in apex." Diagnosis: "Failing Heart, Prognosis, good." (!) "Treatment, Saturday, sulph. mag., every morning, tincture digitalis every two hours. Rest in bed." Under remarks, "This is the first time she has had broken compensation and I think under this treatment she will improve." She died April 8, 1915. Before

this event occurred, however, the bedside notes show that on the first night, "the patient very restless, will not stay in bed." Later, "patient extremely noisy and hysterical and placed in room as she had disturbed ward all night. (The sedatives given showing little or no effect.)" "Patient very restless and noisy." "Patient very restless and noisy all day." "Restless and noisy, had to put side boards on the bed to prevent patient from falling out." And so these quotations continued until the day she died, when stupor developed and death ensued.

In looking this case over, an alienist might say, this was merely a case of senile dementia with mania. But not so, there was no previous history of mental disturbance. We find in this case two weeks history of the accumulation of fluid in the tissues, the patient drowning in her own secretions, then, in spite of eliminative and calmative measures, a mania develops, that lasts until exhaustion and death.

Case No. 2. B. M. Male. Age 38 years. Color, black. Birthplace, Norfolk, Va. Seen on January 10, 1920. Diagnosis, Valvular disease of the heart combined with kidney disease and a positive Wassermann, but no specific lesions evident. Had been to the Rhode Island Hospital where the history was that "the man proved to be a very refractory patient who refused treatment and advice. He absolutely refused to talk or give any information about himself." When seen by the physician on January 10th, he recorded the fact that he "cannot get any data as the patient does not seem to be disposed to impart it, and does not have patience to repeat his remarks." The next day "the patient is restless" and on the next day, "frequent attacks when patient is irrational." On January 12th, "gradually growing weaker, rambling in speech most of the time till he died."

Case No. 3. T. S. Male. Age 74 years. Alleged cause, "old age, and weak heart." "Determined diagnosis, arterio sclerosis with mitral insufficiency." "Has had weak spells, legs have been swollen, has had dizziness in his head and fallen in the street a number of times. A month later under continued treatment, shows that he is very noisy through the night, other patients complain, he is very troublesome in regard to personal cleanliness and his surround-

ings are always untidy. Had to be transferred into a private room on account of his greatly disturbed mental condition."

M. J. Mc. Age 54 years, color white, occupation, night watchman. Family history: No special diseases, as heart disease, tuberculosis and so forth noted in family line. Patient had always been a hard working and respectable man, temperate, and on account of the loss of the right leg in early years, was a home staying body.

About the middle of November, 1920, he came home from his work complaining of a pain in the region of his heart. (The patient had been under treatment for indigestion.) Two physicians were called and stated the patient had bronchitis, asthma and weak heart. He was put to bed. Was seen by physicians every day. Was sent to a hospital and remained there only three days. At this hospital he was considerably excited. Had no sleep unless opiates were given. Became greatly excited with his wife, told her to go home and so forth. After staying in this institution for three days he was taken home. While there he was "rambling in thought, said the bedroom and doors were falling; when locked in, he broke the window; came out and seized his wife, grabbing her by the ankles; wanted to go to work when he was almost at his weakest; make his wife dress him up in his working clothes and said there was some mystery in the house and had delusions against her of marital infidelity. In a moment of lucidity, he wanted his wife to put him in Cranston as he felt he was losing his mind."

He was seen on December 7, 1920, showing all the evidence of valvular diseases of the heart, with a rapid and fluttering heart, and plainly heard murmur. Pulse 90, volume and tension, poor. Under observation he exhibited delusions of identity, hallucinations of sight and hearing. Was greatly excited. Would get out of bed, crawling around on his hands and knees. At night he talked constantly about his work, and would try to get out to go to work. He was isolated because of his noisy condition. He remained in his excited hallucinatory state until November 19, 1920 when he died.

This case had never in any way showed any

previous mental symptoms, being similar to thousands of other quiet, stay-at-home workmen.

We quote no long list of authors, for in searching the literature at our command, we have not found any writer who deals particularly with this phase of cardiac disease.

The case histories might go on to a large number to prove the fact, that mania is very noticeable in the latter stages of diseases of the heart. Age apparently makes but little difference. Whether it is an autointoxication from absorption from an infective arteritis, whether the adrenals were not functioning properly, I do not know. Other and more skillful observers may present a reason or cause for this maniacal state. Theories which I thought to advance in one case, were sometimes contradicted in the next.

In the treatment of this condition, beside observation has taught me that digitalis, "that opium of the heart," given in any form, does not appear to be of much value, and to calm the mania that develops, fairly large doses of any sedative or hypnotic must be given. The changes that take place in "the brain, adrenals and liver," (Crile) are too profound, by the long periods of combative consciousness, to recuperate, and when sleep does come, it is in the form of that "sleep that knows no awakening."

ETHER AND LAVENDER

TYPES THAT WE HAVE MET.

(THE "NATURAL" NURSE.)

Oh Doctor! You know how I adore
Medical study and medical lore,
And knowledge of ills, that's humanity's curse,
I really should have been a nurse;
I'm naturally gifted, my friends all say,
—Perhaps I'll take it up some day,
So I want to ask if you will state,
What is meant by inoculate?

* * *

I know quite a lot of medical things,
Such as 'put wet salt on insects' stings';
On drugs and doses I'm also keen,
For I once had an aunt that took morphine
And to avoid on rising, an aching head,
Took some kind of pills on going to bed.
But confessing faults, is one of my sins;
—Tell me; how do you catch the opsonins?

I wouldn't ask, but you're never cross,
And gladly supply our memory's loss,
And if one forgets the thing to do,
You seem so willing to help us thru.
But there are some things that do seem vague
—The newer things our conscience plague;
Now I'm wise enough to know the facts—
Please tell me how a protein acts?

EPILOGUE.

Æsculapius, kindly Shade,
Come fend us from this chatty jade;
This "natural" nurse; this verbose crank,
Whose skill is naught, whose mind is blank;
All we can do to save offense
From drivelling talk, is to condense
In learned speech and knowing grins,
—When we'd give two bits to kick her shins.

CASE REPORT

By CHARLES O. COOKE, M. D.,

During the past ten days we have had four cases of intestinal obstruction on Dr. O'Connell's service at the Rhode Island Hospital. The four were from different causes. One from cancer; the second from obstruction of the ileum due to a constriction around the omentum; the third cause has not been determined, and the fourth was a case of intussusception.

The patient was an Armenian, 26 years of age. The onset occurred three days before admission to the hospital with pain in the lower abdomen caused by vomiting and inability to move bowels. On examination, at entrance, his condition was poor; the abdomen was distended and very tender, especially at the left of the umbilicus; temperature; leucocytes were 15,000. He was operated upon a week ago to-night. A six-inch incision was made. There was a mass at the ileo-cecal junction which was apparently intussusception. It was impossible to reduce the intussusception and the patient was in very bad condition on the table. The terminal end was passed through the parietal peritoneum. Cigarette drains were inserted. The next morning I opened the jejunum and put a catheter in. Since then he has been draining fecal matter and is in fair condition. Saturday about two feet of tape-worm were washed out.

I thought it would be interesting to put this case on record as intussusception is a common incident, but uncommon in adults.

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EDITORIALS

LEGISLATIVE.

The complexity of the mental activities of man, with his hopes, fears, ambitions, ignorance, traditional beliefs and love for the mysterious, may be responsible for his devotion to the "ouiija" board 'sms, cults or any other agency when he chances to be in pain or out of health.

A fruition of this mental attitude was evident during the last session of the State legislature, in the attempt of certain people to incorporate into the laws of the state a privilege to practice the treatment of disease by the use of a single

manipulatory agent called Chiropractics; the preparation for which "profession" at its best, was a sixteen months training of any (moral) person (presumably of suitable age) who could satisfy the faculty of a chiropractic "college" that he was a graduate of a high school or possessed an equivalent education.

At the "hearing," this Act was strongly supported, passed the Senate, but failed to get before the "House" and therefore did not become a law.

The support to the opposition by many physicians who attended the "hearing," was ascribed to the antagonism of competition as the belief

that they were defending the people themselves from this type of inefficient "treatment" was a too exalted attitude for the comprehension of its proponents, who ignore or know nothing of prevention and research which has done more in the last forty years to save and prolong life than was accomplished thru all agencies employed for two centuries.

It has been said that "Constant vigilance is the price of Peace" and the policy of alertness was never more necessary than now; we are not merely defending ourselves personally, which is a minor role, but we are defending humanity.

Changes in the laws are constantly sought or recommended in the guise of progress which upon analysis appear a retrogression, which brings to mind a matter embraced in the first message of our present Governor, speaking in regard to the Workmens' Compensation Act, in which he says:

"* * * The procedure for the approval of agreements in regard to compensation might well be changed and simplified so as to provide that such agreements shall be subject to the approval of the Commissioner of Labor. Under the existing law, such agreements must be approved by a justice of the Superior Court, and the clerk of the court is required to furnish a copy to the Commissioner of Labor. The change suggested would assure the same protection to the rights of interested parties as the present procedure affords."

Is our interpretation correct in supposing that in this proposed change, that affairs of whatever nature heretofore under the control of the Superior Court is to be transferred to the Commissioner of Labor, who may become the sole arbiter of all matters, judicial and otherwise? Is the final disposition of these matters to rest with his office? If this is so or partly so, it should be strenuously opposed; without the remotest aspersion, it should not be; in connection with which thought a careful perusal of the present law (Workm. Comp. Act, Art. II, Sec. V.,) is recommended.

The present incumbent of the office of Commissioner of Labor, holds in addition, the chairmanship of the Commission of Conservation of the Resources of the State (if we are rightly informed,) and is also the Commissioner of In-

dustrial Statistics, all allied, to be sure, but as bearing upon this law, the Superior Court appeals to us as a highly satisfactory institution of adjustment.

THE OPEN DOOR.

It is quite customary to publish in the RHODE ISLAND MEDICAL JOURNAL, articles that have been read before the meetings of some of the medical societies. This is altogether a proper procedure, but not of necessity a prerequisite or even essential; it is also noticeable that the papers read are usually written by men of mature experience. This is likewise commendable; we are of the opinion, however, that with the advance in medical science and training of recent years, the younger minds, ambitious and eager as they are, could inject into our medical literature an element of interest that we are possibly overlooking.

Probably thru diffidence the younger men are somewhat reticent about offering an opinion in our discussions, and still more so in regard to writing articles for publication.

Our meetings are an open forum wherein the opinion of one man whether young or old, is as good as the next; not only are we living in a young man's era, but it must be borne in mind that the older man also, has something to learn.

While the RHODE ISLAND MEDICAL JOURNAL might not always find it possible to immediately publish all matter at hand, it maintains the attitude and policy of "open shop" and would welcome to its columns discussions of medical subjects, whether in the form of original articles or case reports from this potential resource that is with us, but is as yet, marking time.

ON THE ROAD TO WALLUM LAKE.

It so happened that a few days ago we had occasion to make a professional call upon a patient in the State Sanitarium at Wallum Lake. Quite innocent of what lay before us we set out upon our journey after dark, and even now, when fortunately it is all safely over, we have a most vivid and disagreeable memory of our exploit. From Pascoag to the Sanitarium the road is all poor, but for a stretch of about two miles it is so bad as to be a disgrace to any modern State. What with ruts and ice and frozen mud, to drive over the road is not merely a

test of strength and endurance but a menace to safety as well. It seems unfortunate, to say the least of it, that the aproach to an institution housing more than two-hundred sick people is permitted to remain in such a deplorable condition. No one by any stretch of imagination can picture the situation to be worse than in reality it is.

Having reached the Sanitarium we made inquiries about what has happened on this road and these are a few of the things we learned about it. In the Spring the mud is so deep that automobiles get stuck in it and it has been no infrequent part of the work of the Sanitarium's horses to pull them out; ambulances bearing patients to the Sanitarium have been unable to get there; undertakers have had a similar experience; on Sundays from thirty to fifty motor cars pass in and out over this road and have no doubt a lively recollection of their visit. Surely the builders and guardians of our State highways must have some good reasons for their failure to construct and maintain a passably safe road to the Sanitarium, but to one unversed in such matters the reasons are not very obvious. At any rate, the State owes it to its own self-respect to remedy the conditions that now exist.

HEALTH EDUCATION.

Twenty or thirty years ago the extent of health education was very limited and consisted practically in dwelling on the effect of alcohol and tobacco on the human system. This teaching was generally accompanied by a vivid picture of the stomach which had been subjected to alcoholic hardening. Since that time, however, there have been great changes in the methods of health education and to-day the public has many opportunities that were not formerly available.

In the schools, with the medical supervision of various kinds, the child soon realizes that there are such things as adenoids—that decayed teeth are not desirable—that a proper nutrition is necessary for efficiency. In the shops and factories, with the facilities for first-aid treatment, the employees have a chance to gain knowledge about themselves. In the hospitals, which have increased so materially in numbers in the last few years, the free clinics offer to the public un-

told opportunities for knowledge and education. The great mass of pamphlets and reports issued by local, state and federal authorities, dealing with all the health problems of human life from the unborn babe to decrepit old age, has opened to all parts of the country—rural as well as urban—the sources of much valuable information. The magazines and the daily press have contributed their share by means of articles by laymen and professional men and by means of queries and answers. Finally the "movies" have been used to carry the message of health to many who are either unable or unwilling to learn from the printed page.

All these agencies of education have had an effect in changing the practice of medicine and physicians should appreciate this change and adjust themselves to the new conditions. It is impossible to keep from the public the information that is demanded. It is a fact, however, that some physicians would like to keep from the public whatever knowledge they have gained and only dole it out to the individual patient in doses suitable for that case. We must always remember that the function of the true physician is not only to cure the disease, but also to do all in his power to prevent others from contracting the disease. Preventive medicine is the medicine of the present and the future, and the education of the public is one important step in accomplishing the desired result.

RHODE ISLAND MEDICAL LIBRARY BUILDING.

Few of the State Medical Societies are fortunate in the possession of buildings of their own, dedicated to their meetings, and for the housing of their libraries, and of these none are better equipped than the Rhode Island Medical Society, considering its size, etc. We have a splendid meeting place, an ample stack, whose shelves contain, thanks to the wise oversight of a conscientious committee on Library, an up-to-date collection of standard books and files of contemporary medical journals. It is a pity that the Library is not used more by the profession. That it is not, is a conclusion forced upon one when it is seen how rarely a member delivers a prepared paper before the city or state society. A

closer acquaintance with the possibilities of the library to furnish references and cross-references would doubtless spur the members up to using its facilities and preparing original papers for the societies' proceedings. This would work a benefit not alone to the writer of the paper, but would serve to increase the interest in the meetings. It cannot be urged too forcibly on the profession that they have at their elbow, splendid opportunity for study in the Medical Library and the services of a trained librarian to aid in searching the literature for references.

WELFARE WORK.

With the great increase of welfare work of all kinds, especially that for children, which has been markedly developed since the draft examinations demonstrated that we were far from normal in physique and development, with the great advance in public health nursing, and with the attempts that many organizations are making to educate the public along health lines, it is pertinent to consider what the attitude of the medical profession should be towards these various movements.

Shall the profession resent the encroachment of their field and make a stand for their rights? Does the existence and the extension of such welfare work take away the rights of the individual to conduct his health life as he wishes? Is not the supposed necessity of such education a reflection on the ability of the modern parent to care for himself and children? Does not the rapid growth of these movements show a tendency toward the socialization of the medical profession?

By many some of these questions will be answered in the affirmative, but the physician, who still maintains that the profession has certain ideals to attain, will not so answer. The ultimate ideal of the medical profession is a state where disease is under full control, where the preventable diseases are known only by name, and where the function of the physician is to prevent the development of disease by keeping the people well. With such an ideal, even if the attainment is almost beyond the possible, the medical profession cannot consistently oppose these movements

or retard their progress. The better way would be to coöperate freely, helping to eliminate the bad features, ever striving to make the prevention of disease the ultimate ideal of the profession.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

November 1, 1920.

The regular monthly meeting of the Providence Medical Association was called to order in the Rhode Island Medical Library by Dr. D. L. Richardson on November 1, 1920, at 9 p. m.

The records of the previous meeting were read and approved.

An invitation from the Society of Sigma Xi of Brown University to a lecture by Professor Stockard of Cornell Medical College, New York, entitled "Rate of Growth and Quality of Stimulation," was read.

The application of Dr. Jeffrey James Walsh having been approved by the Standing Committee, it was voted by unanimous consent that the Secretary be instructed to cast one ballot for his election.

The first paper of the evening, "A Plea for Wider Use of the Tuberculosis Clinics and Hospitals," by Dr. Elliot Washburn, Executive Secretary, Providence Tuberculosis League, was read.

The discussion was opened by Dr. Harry Lee Barnes, and continued by Drs. Corvese, Washburn, Gray and Barnes.

The second paper, entitled "Recent Advance in the Knowledge of Meningococcus Infection," was presented by Dr. W. H. Herrick of New York.

The discussion, opened by Dr. Fulton, was continued by Drs. Kelly, Burgess, Jordan, Adams, and was closed by Dr. Herrick.

There being no further business the meeting adjourned at 11:05 p. m. on a motion in rhyme by Dr. William R. White.

Sixty-seven members and seven guests attended the meeting, and the usual collation was served.

Respectfully submitted,

RAYMOND G. BUGBEE, M. D.,

Secretary.

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otolological Society was held in the Miller Room at the Medical Library on December 9, 1920, at 9 o'clock.

The papers of the evening were, "Cycloplegia in Refraction," by Dr. F. J. McCabe and "Mastoiditis with Meningitis, a case report," by Dr. H. E. Blanchard. The papers were thoroughly discussed by all present and the writers were congratulated upon the splendid papers presented.

Meeting adjourned at 11 o'clock.

J. L. DOWLING, M. D.,
Secretary.

KENT COUNTY MEDICAL SOCIETY,

The Annual meeting of the Kent County Medical Society was held at Moose Neck Inn, December 16th, 1920, and the following officers elected for the ensuing year:

President, J. F. Archambault, M. D., Arctic, R. I.; Vice-President, Gilbert Houston, Jr., M. D., Arctic, R. I.; Secretary, Daniel S. Harrop, M. D., Riverpoint, R. I.; Treasurer, Frank B. Smith, M. D., Washington, R. I.; Censor, (for three years) Charles Ormsbee, M. D., Quidnick, R. I.

The meeting was largely attended and included as guests, Dr. Chas. O. Cooke, Dr. Frank M. Adams and Dr. Armitage.

The literary offering of the day was a paper entitled, "Fads in Medicine" by the retiring President, Dr. Frank B. Smith, of Washington.

With fifty years experience in the practice of medicine in retrospect, Dr. Smith was able to entertain his hearers in a most pleasing manner.

After adjournment a chicken dinner was served in the dining room.

HOSPITALS

RHODE ISLAND HOSPITAL. Providence, R. I.

On Monday, January 10, the regular quarterly staff meeting was held at the hospital and the usual hospital business was transacted.

The members of the various departments of the Rhode Island Hospital are holding monthly meetings to conform to the requirements of the

American College of Surgeons. These meetings are not only instructive but tend to bring the members of each department in close touch with each other.

Dr. B. H. Buxton has resigned as assistant anesthetist and has been appointed assistant Gyn. Surgeon.

Dr. Paul C. Cook has been appointed assistant anesthetist.

Dr. Walter G. Sullivan has been appointed Ophthalmological Externe.

Dr. Arthur H. Hollingworth, Visiting Surgeon, has resigned and has been appointed to the Consulting Staff.

Dr. William B. Cutts, Visiting Surgeon, has resigned and has been appointed to the Consulting Staff.

Dr. Parnell E. Fisher, Visiting Physician, has resigned and has been appointed to the Consulting Staff.

Dr. Albert E. Barrows has been appointed Visiting Surgeon.

Dr. J. C. O'Connell has been appointed Visiting Surgeon.

Dr. Nat. H. Gifford and Dr. Raymond G. Bugbee have been appointed assistant Visiting Surgeons.

Dr. James F. Boyd is having a new X-ray transformer installed in the X-ray Department.

Dr. Harvey B. Sanborn has been appointed Neurologist.

Dr. Ernest A. Charbonnel has been appointed assistant Dental Surgeon.

Dr. Earl R. White has completed his internship and will enter the Providence Lying-in Hospital for internship service.

Dr. Louis J. Cella has been appointed externe in the Urological, Out-Patient Department.

Dr. Peter P. Chase and Dr. Emery M. Porter have been appointed Surgeons to the Out-Patient Department.

Dr. Charles F. Gormly and Dr. John G. Walsh have been appointed Physicians to the Out-Patient Department.

Dr. Pearl Williams and Dr. Michael J. Nestor have been appointed Physicians to the Pulmonary, Out-Patient Department.

Dr. Prescott T. Hill has been appointed assistant Physician to the Pulmonary, Out-Patient Department.

Dr. A. B. Bradshaw and Dr. Geo. E. Teehan have been appointed assistant Surgeons to the Urological, O. P. D.

Dr. Eric P. Stone has been appointed Externe in the Gynecological, O. P. D.

Dr. Jeffrey J. Walsh, Dr. Arthur Brown and Dr. Antonio C. Ventrone have been appointed Externes to the Nose and Throat, O. P. D.

Dr. Edward A. McLaughlin, who recently finished his internship at the Rhode Island Hospital, has been appointed Externe in the Children's Department.

Mr. William H. Fowler has been appointed Engineer at the Rhode Island Hospital.

A new Dental Outfit has been installed in the Out-Patient Department. The work in this new department is to be treatment and filling. The work for the present to be confined to children referred from other departments in the O. P. D., of the Rhode Island Hospital. It is a complete up-to-date unit. Dental work is of course unlimited but it is hoped that some of the needy cases may be handled in this department, and that the work, though necessarily limited as to numbers, may lead to the establishment of a larger dental clinic or more clinics throughout the city. The Extracting Department is an entirely separate department where extracting only is done.

Work on the Jane Francis Brown Pavilion for Private Patients is progressing favorably.

The tunnel connecting with the main building is completed and the inside work is going on rapidly. It is hoped that at least a part of the building may be opened next fall.

Emma L. Dunn, R. N., who has charge of the Crawford Allen Memorial Hospital at East Greenwich during the summer months, is in charge of the Out-Patient Department for the winter.

Dr. Arthur E. Martin, who recently finished the regular two year internship at the Rhode Island Hospital has accepted a position as physician to the State Institutions.

The following men have been appointed internes at the Rhode Island Hospital for the ensuing year:

July 1, 1921—John Wendell Helfrich, Henry Francis McCusker.

Oct. 1, 1921—Earl Allwood Bowen, William Newton Hughes.

Jan. 1, 1922—John Gordon Anderson, Francis J. King.

April 1, 1922—Cyril Michael Lydon, Edward G. Melvin.

Vacation period:—Kenneth Harrison Rice.

Norman C. Baker, M. D.,

Sec. Staff Ass'n.

CITY HOSPITAL.

Dr. Robert M. Lord finished an internship of three months on January 1st and begun a medical service at the Children's Hospital, Boston, Massachusetts.

Dr. John H. Brothers finished an internship of seven months on January 1st and begun his service at the Rhode Island Hospital.

Dr. Henry S. Joyce begun a three months internship on January 3rd.

NEWPORT HOSPITAL.

At the December meeting of the Trustees of the Newport Hospital, the following additions were made to the staff:

Dr. Frederick A. Asserson, Visiting Surgeon.

Dr. Howland Gibson, Medical and Surgical Assistant.

Dr. Francis A. Keenan, Visiting Physician.

Dr. Norman M. MacLeod, Visiting Physician.

MISCELLANEOUS

PERSONAL.

Dr. J. A. Mock, of Crompton, spent the holidays with his sister, Mrs. Charles W. Lawler of Holyoke, Mass.

Dr. Chas. S. Christy of Riverpoint, recently suffered an attack of pneumonia and has recovered.

The pleasing news reaches us, that the stork visited Dr. and Mrs. H. L. Johnson of Westerly, January, 19, and left a daughter.

LIBRARY NOTES

JOURNALS SUBSCRIBED FOR BY PROVIDENCE MEDICAL ASSOCIATION.

American Journal of Insanity, American Journal of Roentgenology, American Journal of Syphilis, Archives of Pediatrics, Brain, British Journal of Children's Diseases, British Journal of Tuberculosis, British Medical Journal, Endocrinology, Heart, Journal of Cancer Research, Journal of Experimental Medicine, Journal of Immunology, Journal of Industrial Hygiene, Journal of Medical Research, Journal of Orthopedic Surgery, Lancet, Medical Record, Military Surgeon, Modern Hospital, New York Medical Journal, Progressive Medicine, Psychological Clinic, Quarterly Cumulative Index, American Medical Association; Quarterly Journal of Medicine; Surgery, Gynecology and Obstetrics; Surgical Clinics of Chicago.

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ORIGINAL ARTICLES

THE RADICAL TREATMENT OF TRIFACIAL NEURALGIA.*

By FRANK E. McEVoy, M. D., F. A. C. S.,
Providence, R. I.

The radical operation for the relief of trifacial neuralgia has long been looked upon as a most formidable surgical procedure. It is described in a standard text-book of surgery as being "bloody, difficult and dangerous," and no doubt formerly deserved this reputation. In recent years, however, with gradual refinements in technique, the development and improvement of certain special instruments, chief among them being the retractor equipped with lights, this operation is a safe and efficient procedure, and, in the hands of men specially trained in this branch of surgery, the results compare favorably with those of any major abdominal operation. The writer has assisted at forty-seven consecutive operations without a death and at ninety-five in which there were but four deaths, surely a creditable mortality record. These results are largely due to the pioneer work of Hartley, Cushing and Frazier in this country, and to Hutchinson, Horsely and Krause abroad. The greater the experience of the surgeon in this operation, the smaller will be the mortality. Knowledge of the region and parts, dexterity from frequent repetitions and special training count for much.

Of all the nerves, the trigeminus is the most liable to neuralgia. The treatment of this painful affliction has varied from many palliative to the most drastic methods, and I think we may safely say that, with the exception of deep alcohol injections, the palliative measures have been of little value, and the radical intracranial operation has been attended in the past with so many

complications that it has been recommended only as a last resort.

The etiology of the disease is unknown. Frazier thought it due to sclerotic lesion of the ganglion; Sir Victor Horsely thought it due to ascending dental infection, but this is probably not so because there is no anesthesia and also no paralysis of the motor branch. Dana thought it due to degenerative changes in the ganglion. Sluder has reported cases which he thought due to recurring infection in the sphenoidal sinus. It is a very common thing to see patients who have had teeth extracted, repeated drainage of the accessory sinuses, and operations on the septum, who have recurring attacks of trifacial neuralgia. The diagnosis of the condition rarely presents difficulties. It is distinguished from all other pain about the head and face by the severity and brevity of the pain, which is brought on by peripheral irritation such as eating, talking, drinking, exposure to drafts, brushing the teeth, etc. The patients describe the pain as shooting, stabbing, boring, darting or burning as if a red hot poker were thrust into the face. The disease usually occurs from the third to the fifth decade. Patrick has reported a case beginning at the age of seven and three which were over seventy-five. There seem to be no predisposing factors and the disease is not hereditary.

Before the use of deep alcohol injections, many drugs were used in the treatment, among them aconite, belladonna, morphine, salicylates and various courses of catharsis. Local operations, such as the removal of teeth, drainage of the antra, treatment of the nose and pharynx with local applications were used, and these methods are still employed to a large extent. Avulsion of the peripheral divisions of the fifth nerve with the insertion of plugs or screws into the infra-orbital and dental foramina is also employed. It has been shown that these peripheral operations give relief for an average of eight months

*Read before the Providence Medical Association, December 6, 1920.

and that they are not satisfactory for the reason that the pain is apt to recur before the peripheral segments have regenerated sufficiently to permit re-avulsion.

Alcohol injection of the peripheral branches was first described by Petres and Verger in 1902 and by Schlosser in 1903. Since that time it has been modified to a slight degree by Patrick. In 1914 Hartley described a technique for injection of the ganglion. The alcohol is injected into the peripheral divisions at their foramina of exit. This treatment is definitely indicated as, in a certain group of cases, it affords temporary relief and, in some few, relief has been obtained for several years. In the early cases, it is probably good judgment to give one or two alcohol injections. In those cases where the operative risk is great and in the aged, alcohol injection is undoubtedly the method of choice. It is true that each successive alcohol injection affords a shorter period of relief, and it is also true that, even in the hands of the most expert, it is only possible to hit the nerve in 60 per cent. of the cases on the first trial, so that the attempts must be often repeated.

The first radical operation was performed by Rose in 1890. He removed the gasserion ganglion by approaching it through the floor of the middle fossa. Because of the many complications in the way of bleeding and paralysis of the neighboring nerves, he was compelled to abandon the procedure. In 1898 Hutchinson advised partial resection of the ganglion. He removed the outer two-thirds, including the second and third branches, thus saving the ophthalmic division and preventing complications in the eye. This operation will relieve patients with involvement of the second and third branches, but does not relieve those who have involvement of the ophthalmic division and, further, the removal of the ganglion from its bed is attended with very serious hemorrhage. In 1898 Spiller suggested the division of the posterior root, a procedure known as "physiological extirpation." In 1900 and 1901 Frazier and Spiller carried out a series of experiments demonstrating that regeneration does not take place if the posterior root is divided and in 1918 Frazier reported a series of cases in which successful results had been obtained by the division of the posterior root.

The complications attending the various ganglion operations have been serious hemorrhages, paralysis of the oculomotor, trochlear and abducent nerves, occasional paralysis of the frontal branch of the facial nerve, and ulcerative keratitis. The bleeding has been due to inability to control the venous hemorrhage and occasional injury to the middle meningeal artery. But as better exposure of the ganglion is now possible by means of the retractor equipped with light, hemorrhage is rarely a serious obstacle. Frazier has called attention to the advantages of using small pledgets of cotton both to elevate the dura and to control the venous hemorrhage on the floor of the middle fossa. The middle meningeal artery can be tied or the foramen spinosum plugged with wax. The paralysis of the third, fourth and sixth nerves is avoided by use of the ganglion retractor which keeps the dura on tension and does not rest on the cavernous sinus or the ocular nerves. Injury to the frontal branch of the seventh nerve may be avoided by using Frazier's incision or, better still, by using a straight incision as is used in making subtemporal decompression. Paralysis of the facial nerve has been an occasional complication. This is probably due to the fact that the dura is stripped from the petrous portion of the temporal bone or to the fact that blood occasionally works its way into the Fallopian aqueduct, thereby making pressure on the nerve. Since it has been the practice to cut the posterior root rather than avulse it, seventh nerve paralysis has been a very infrequent occurrence.

OPERATION.

The patient is placed in a semi-erect position. The selection of a suitable incision is an important consideration since it is necessary to preserve the upper branch of the facial nerve supplying the muscles of the brow. In 1891, Hartley, who did much for the advancement of cranial surgery in this country, advocated turning an osteoplastic flap with its base at the level of the zygoma. Since that time it has been found unnecessary to make a bone flap and, further, in this operation the branch of the facial nerve supplying the occipito frontalis muscle was often injured. Cushing modified this incision by shortening its anterior limb in

an effort to avoid this complication. Later Frazier suggested a question mark incision in the scalp entirely within the hair line. He turns a flap in the scalp and then another in the facia in the opposite direction from that in the scalp. He does not turn a flap in the bone, but makes an opening as is made in ordinary subtemporal decompression. At first he temporarily resected the zygoma, but this also has been found unnecessary. About a year and a half ago, the writer suggested the use of a straight incision beginning about three inches above the zygoma and extending about a half inch below it. The fascia and muscles are incised in a similar manner. At the lower angle of the wound, the fascia is incised at right angles on each side of the vertical incision, in order to give better exposure. This incision has several advantages over those mentioned above. It can be rapidly made and quickly repaired. It gives ample exposure and is situated sufficiently far back to preclude the possibility of injury to the facial nerve. It is entirely within the hair line. It has been used with entire satisfaction at the Mayo Clinic for the past year and a half. A subtemporal decompression is made, an area of bone about 3 cm. by 3 cm. being removed. The dura is gently elevated from the middle fossa until the middle meningeal artery is reached. This can be ligated in about 80 per cent. of the cases. In the remainder, it will be found necessary to plug the foramen spinosum with wax. The dissection is then carried posteriorly and upward, exposing only the posterior margin of the ganglion. It is well to expose as little of the ganglion as possible, thereby avoiding troublesome hemorrhage. The dura propria covering the ganglion and posterior root is now incised. A hook equipped with a guillotine knife is placed over the root and the latter is cut, thereby avoiding trauma to the surrounding structures. The fibres of the posterior root just above the ganglion are turned down over the ganglion and the posterior fibres are pushed back into the middle fossa, and a small piece of muscle is inserted in the opening in the dura as a plug to prevent loss of cerebro-spinal fluid. To control the oozing in the neighborhood of the ganglion, it is frequently necessary to use a small gauze pack, which can be removed about the third day. The muscle and fascia are closed with chromic

catgut No. 1, and the skin with interrupted silk sutures. The patient usually leaves the hospital in from seven to ten days.

When we consider that deep alcohol injection is the only other means that offers relief, and this only temporarily; and that with each succeeding injection the period of relief becomes shorter, until the victims become morphia habitues, unable to work and, in many cases, unable to eat, their plight is indeed pitiable, and it has been estimated that 20 per cent. of them take their own lives. Submission to the radical operation means permanent cure. I have told you that in a series of ninety-five, four died, two from hemorrhage and two from infection, both avoidable complications. One-half of the face is numb, a condition to which the patient soon becomes accustomed and of which he rarely complains. Because of anesthesia of the eye-ball, he must protect the eye with goggles when in the wind and dust.

CONCLUSIONS.

1. Division of the posterior root is a sure and permanent cure for trifacial neuralgia.
2. In the hands of competent surgeons, the mortality from this operation should be no greater than from any other major surgical procedure.
3. Alcohol injection is the best palliative measure but its effects are only of short duration and must be repeated often. Rarely is a cure effected by this means. It subjects the patient to long continued and unnecessary pain, since he will eventually be forced to submit to the radical operation.

ADDRESS OF THE RETIRING PRESIDENT OF THE KENT COUNTY MEDICAL SOCIETY.*

FRANK BAILEY SMITH, M. D.,
Washington, R. I.

FADS! FADS IN MEDICINE!

Gentlemen I have for my subject Fads; Physicians Fads in Medicine. In the early Seventies, torpid liver and valvular disease of the heart were the principal ailments of the adult.

*Read at the annual meeting of the Kent County Medical Society, at Moose Neck Inn, December 16, 1920.

The treatment consisted of a few but sure cure remedies, viz: Compound cathartics and dilute carbohc acid and olive oil injections for the one and fluidext digitalis and iodide of potassium for the other. The next fads were diphtheria and membranous croup; almost any sore throat was one or the other; this of course was before they were called one and the same. The fashionable treatment was chlorate potash and iodide of potassium for the one and muriated fluid of iron for the other, and occasionally tracheotomy in severe cases.

Tic Douloureux, (Facial Neuralgia) or neuralgia of fifth pair of nerves was the next most fashionable complaint, with old or young, male or female. Treatment was hydrate of chloral;—sure cure.—“Cramp Colic,” was also very fashionable about this time. Treatment was the same as the other; hydrate of chloral of course because that was then the “Fad” remedy for everything; sure cure.

Distention of the transverse colon came in next. Treatment, listerine and quinine or cinchonidia, high injections of listerine and large doses of quinine if the temperature was high, to take down the fever; if the temperature was low, give larger doses to stimulate the heart action and increase the circulation.

Scrofula, a result of inherited syphilis or rheumatism from the same cause, became plentiful about this time. Treatment of course was iodide of potassium and comp. fluidext, sarsaparilla; sure cure till the next fad cure appeared.

If I remember correctly the next fad was peritonitis. Any and all abdominal pains were by the fadist called peritonitis and the treatment was hot fomentations and turpentine to carry off gas, and sulphate of morphine to relieve pain, the most sensible fad of the lot for the case.

About this time it was found necessary to put nearly every woman's uterus into a glass jar, which was the proper place for it; but when they found it shortened life, it was only recommended for those who desired no more children or actually had malignant disease.

The next fad for our surgeons was the removal of the ovaries, this would prevent tumors, large families and appendicitis which was fast becoming a fad. In fact I know one surgeon

who opened a hospital for *appendicitis cases only*, and made it his specialty and did a flourishing business for several years.

About the next fad was tuberculosis of the joints with the surgeon, and tabes mesenterica or consumption of the bowels with the general practitioner, if he happened to be a fadist. Treatment of course was to wash out the stomach by all means or be guilty of misdemeanor and neglectful of your patient, and give free doses of salicylic acid or soda according to amount of acid in the urine, and by all means use blue glass, (even keep your drugs in blue glass containers.) Put your patient at a blue glass window and let the sun shine through it upon liver for several hours every day, it would surely cure any ailment from an ingrowing nail to a bald head, from a ring worm to a tape worm. I never got so sick of any fad as I did of this. People put blue glass in their sleeping room; I suppose hoping the sun would shine nights or that the moon might have some effect.

Then came renal disorders and the buchu treatment. Buchu would cure nearly everything, it was the chief remedy in the materia medica advertised on every rock, barn and fence, it seemed almost ever lasting.

Then came ossification of the arteries. Hardened arteries was all the go, a perfect rage or fad. A physician who did not have a case of hardening of the arteries on hand was a back number. Of course I had such cases, in fact my own arteries began to harden as soon as I was born, probably began as soon as the valve of foramen ovale closed or the tying of the umbilical cord, but I am still alive.

Then came neuritis. Oh, my! what a fine disease; it fitted all hands and all places, pain in the head, finger or toe, back-ache, weak legs, swollen ankles, pain in the joints, any where, every where.

Patient consults specialist; neuritis in the eye, abdomen, leg, arm, chest, and especially in the spine. Treatment, anything that is new to the patient. Simple wash of boracic acid, massage externally and phenacetine or sulphanol internally, till the patient gets disgusted; then falls back upon electricity and finally decides it may be cavities of the teeth and must be sent to your favorite dentist as a last resort for the tooth fadist. Then comes adenoids for the fadist of

the fads. Everybody but myself should have an operation at once. Why, one cannot escape catching every disease flesh is heir to unless an operation is performed, and at once. It is now getting a little old, so the next fad is gall stones; any pain between the sternum and pubis is gall stone; treatment, operation at once. If you fail to find the stones, they passed into the intestine during anesthesia. If you find them, "What did I tell you?" You would have died immediately if operation had been postponed. What next?

Complications probably. Treatment, aspirin tablets, different colors, occasionally; open air; have your blood pressure taken after every day or two till you get tired of both treatment and expense.

Gentlemen, we are all more or less susceptible to fads. I am so obstinate that I do not push it as hard as many, but I am obliged to fall in line occasionally. But the latest fad I hardly think will get me; it is the yeast fad. I will now read what Dr. Hershberg, A. B., M. A., of New York said last month:

"Your mouth is probably the most important gateway of life. Through this entrance must pass the rations and drink necessary for the maintenance of growth and repair, as well as the sustenance required for energy, strength, health and productiveness. The pabulum you call table-stuff, meats and drink, are demanded to build up the daily wear and tear of the daily grind to give heat, power and muscular work, to grow skin, flesh, bone and brawn. As taught in old medical books, you may eat a lot of meat, eggs and beans in plenty and live a lingering, unproductive, chronic grumbling kind of existence. Why? Simply by virtue of the facts discovered by numerous scientific physicians, notably Professor McCallum of Johns Hopkins, Dr. Levine of Rockefeller Institute, Professor Casimer Funk and many others, that fats, sugars, oils, starches, meats, fish and eggs may be fed you in abundance, but you will be sickly, full of spleen and bitterness, chronic complaints and only average earning power, ready to succumb to the first epidemic or contagion or fever which assails you. In other words, eating like a glutton may not always save you from starvation. You may have all the viands of a Monte Cristo, nevertheless have beri-beri, scurvy, rickets, pellagra, aches, boils, pimples, carbuncles, black-

heads, diabetes, joint pains, which you love to call *rheumatism*. It is now conceded by all up-to-date physicians there is something lacking in your food and nourishment. The fact is, when you do not eat your fill three times a day of some fresh fish rich in soluble 'B' and fat soluble 'A,' foodstuffs better known as vitamins, you may feed up like a 'three-headed giant,' yet be a grouch, grumbler and ugly by nature and appearance and a weakling so far as health and vitality are concerned.

"Happily there is always at hand a simple, cheap, plain, every-day-and-Sunday-go-to-meeting food, viz., the yeast cake, which contains a liberal supply of vitamins. A fresh yeast cake is certainly an ideal food, if eaten freely, flavored or not, three times a day, before or with meals. In its composition are to be found mineral fertilizers for human use, vitamins, water soluble 'B' for sugars, starches and egg-white like stuff. Obviously if yeast is such a powerful aid to health as a remedy for the plagues of complexion blemishes, a superior treatment for malnutrition, marasmus, blotches, hives, blackheads, pimples, furuncles or boils, carbuncles or anthrax, undergrowth, slow teething, rickets, scurvy, bow-legs, knock-knees, pigeon toes, pellagra, arthritis, obesity, under-nourishment, anemia chlorosis, yeast in doses of a cake a day flavored with fruit juices or milk, have been found in some instances a magic or specific treatment. Official reports sent to medical societies and scientific organizations by such physicians as Philip B. Hawk of Jefferson Medical College, I. R. Klien of New York, M. Le Vine of Rockefeller Institute and others here and abroad, prove conclusively that yeast is not only harmless, but as essential as bread itself. Experiments carried on in research laboratories of the aforesaid institutions agree with the American Medical Association Journal of October 13, 1917, viz., 'that yeast survives a good while in man's stomach and multiplies and enters the intestines alive and helpful.' " The American medical profession has really led the rest of the world in its advocacy of three cakes of yeast per day.

"French and English physicians are now following suit. Yeast, like herbs, fruits, moulds or vegetation, makes carbon, potash, phosphorus, oxygen and elements found also in growing things, which thrive, grow and reproduce their

kind. A cake of yeast contains thousands of these fungus plants, which help absorb the excess waste you do not need, at the same time yielding unto Caesar that which is Caesar's, to wit, health, vitamins, resistance to disease and vitality. It is also an excellent application directly as a paste or lotion for the removal of acne pustules, pimples, greasy skin, boils, furuncles and various other blemishes and skin bacteria."

Medical men of an orthodox or conservative type seldom believe there is any medicine or remedy that is a specific for more than one sort of pathological condition; exceptions to this rule are few, but yeast seems to be the newer panacea. The beneficial influence of yeast and its exceedingly valuable value as a prophylactic or preventive remedy really makes it more precious than 'Cabbages and kings,' as Alice in Wonderland might say."

Gentlemen, we have camouflaged ourselves and the public too long; we have been obliged to drop the word camouflage, and I hope we will soon do away with fads. In all seriousness, we are too much given to them.

Let us become self-respecting co-workers for the good of our patients and our profession. Let us be dignified, not lofty; but level-headed, conscientious, moral men, who respect our profession and ourselves, remembering that we are working for those who are in trouble; let us be reasonably sympathetic for our patients and do our best for them, even when they seem unreasonable and try our nerves severely. If we are faithful, conscientious and do our part for them we have nothing to regret, whatever the outcome. Let us be careful when we give our diagnosis and not promise too much, and not always give the name of the remedies used, only when we think it best to do so. We cannot please everybody, but we can use everybody well and still respect ourselves and our profession. I have practiced fifty years, if I include my practice while a student before graduation. I have had many anxious days and nights. I have also had lots of pleasure in my business and have never regretted my choice of profession. I have done business for all classes, rich, poor, high, low, good, bad and all intermediate grades, and find all have some good traits and all have drawbacks. Some will go back on you without any known cause, and those whom you have done the most for will injure you all they possibly can, and in many instances will even lie

without any cause; but others will stand by you through thick and thin.

I recently had a letter from a nurse in Boston. She was a little girl when I last saw her, bright, cheerful and good. I treated her kindly and she remembered it. I have not seen her for nearly twenty years, but she remembers my kindness to her: she certainly can have no selfish interest whatsoever in writing me, but I certainly enjoyed reading her letter.

Years ago I was often called to treat the inmates of a certain roadhouse (or inn) till I became disgusted and gave it up. I usually gave them some good advice. One day a lady came into my office with a bright little boy, and she said, "You do not know me, do you?" I said, "No; but still you have a familiar look." She asked, "Don't you remember giving me some advice when I was at the roadhouse on the pike?" "Well," I said, "I gave so many of them advice that I cannot say that I do. "Well," said the woman, "You told me I was smart enough to get my living some other way and advised me to go home, confess and begin anew. I said, 'No, I cannot,' but upon consideration, knowing you were right, I did so. I have married not only a smart man, but a good one, and this is my little boy, and I have the best mother-in-law I ever saw. We live in the same house. I came all the way from Providence to-day to thank you for your advice. I think I would have been dead now, or, to say the least, would have been diseased and ruined long ago."

This girl was not beautiful, but sensible. This is not the only case of the kind. I have had others thank me for the same advice. I assure you it pays to be honest, even if inconvenient. I have practiced long enough, but what can I do? If I retire I fear I will become uneasy; I am not bidding for business now, but doing as little or much as I can consistently do and do it well. Long drives, night drives, obstetrics and cases that require constant attention and long delays I decline. To sum the matter up in a few words, I will say I am trying to enjoy myself as I go along, and that the country physician who practices fifty, or even forty, years who does his duty to his patients, pays his honest debts, does not oppress the poor and gives his "tenth" to the Lord (and all this I have tried to do) earns all the money he gets out of it, probably much more. Adieu.

CYCLOPLEGIA IN REFRACTION.*

DR. FRANK J. McCABE,

Providence, R. I.

In presenting this paper on Cycloplegia, I do not pretend to outline any new schemes or methods, but rather to appeal for more careful, thorough and intelligent work on the part of refractionists.

The word cycloplegia is taken from the Greek words *Küklos* *Prnyú*, meaning stroke or paralysis of the circular or ciliary muscle. There are other causes of paralysis of the ciliary muscle or if you choose, paralysis of accommodation, but this paper has to do only with that which is due to cycloplegia used for refraction purposes. The action of these drugs, when dropped into the conjunctival sac, is supposed to be by direct absorption, through the blood and lymph vessels at the corneo-scleral margin, into the iris and ciliary muscle, where the nerves and ganglia of these structures are immediately affected.

The theory of the mechanism of the accommodation advanced by Helmholtz and confirmed by Hess, Fischer, Voelckers and Hensen is, stated briefly, as follows: "The crystalline lens is an elastic body upon which traction is made in a radiating direction by the tension of the zonula which is attached to its margin and is therefore, somewhat contracted in the direction of its symmetric axis. . . . The radiating fibres of the ciliary muscle running in the direction of the meridian of the eye, which ends in the tissue of the choroid at the posterior end of the ciliary processes, draw forward the posterior extremity of the zonula which is firmly attached to the choroid at this place, and relax the tension exerted by the zonule upon the periphery of the lens, so that, in consequence, the lens contracts in the direction of its diameter and becomes thickened in the direction of its axis.

In other words, during the act of accommodation, the following changes take place in the eye: (1) The ciliary muscle contracts. (2) And by contracting, makes a smaller circle. (3) The tensor choroideae draws slightly on the choroid compressing somewhat, the vitreous, and these two sets of fibres, sphincter and meridional, act-

ing together, relax the ligament of the lens, with the result, that—(4) The lens fibres, no longer held in check, become relaxed, and by their own elasticity allow the lens to become more convex, especially on its anterior surface. (5) The anterior surface of the lens, being made more convex, approaches the cornea. (6) The posterior surface of the lens becomes slightly more convex, but retains its position at the pole. (7) The lens axis is lengthened, but the equatorial diameter diminishes, thus keeping up the uniform interval between the equator of the lens and the ciliary body. (8) The anterior chamber becomes slightly more shallow at the centre and deeper in the periphery, and (9) The iris contracts.

Having thus reviewed the part played by the ciliary muscle in the accommodation, we conclude that asthenopia, as usually considered by oculists, means a disturbance in the functions of this muscle in an attempt to overcome the refractive error, of course, a disturbance of the function of the external muscles, should be considered. Since, during our waking hours, the accommodation is being constantly changed by the action of the ciliary muscle, it also follows, that the refractive condition is also constantly altered.

The question which is of importance is, how best to determine the refractive error and how best to overcome it, so as to best serve the suffering patient who comes to us for relief.

On most points connected with the practice of refraction, we are pretty much agreed. On some, notably on the question of the use or non-use of cycloplegics, there is still much difference of opinion. Some few hold, that it is sufficient to correct the manifest error, because this will often give relief from the symptoms. Others, and they are in the great majority, maintain that it is absolutely necessary to determine the static refractive condition before one can fairly form a judgment as to the glass to prescribe in each particular case.

Edward Jackson of Denver, says, "The use of a cycloplegic is necessary whenever it is desired to make a complete study and accurate measurement of the refraction in a patient under 50 years of age. Without it, the refraction can be guessed at, often correctly."

Alexander Duane states,—that in the great majority of cases, the refraction of the eye can

* Read before the Rhode Island Ophthalmological and Otological Society, December 9, 1920.

not be determined with certainty without the use of cycloplegics. This statement applies to astigmatism as well as to hyperopia and to both more than it does to myopia. In making this statement, he says, "I would not for a moment be understood as underestimating the necessity of making a careful test of the eye in its natural condition. This, I myself, do invariably, and in a large number of cases, by so doing, arrive at the same result as under cycloplegic. But as I can never be sure in any given instance that this will be the case and as in some cases, in which I had reason to think that the results would be the same, they have turned out to be different, I feel that I must give myself and the patient the added certainty that the use of the cycloplegic affords. At the same time, I feel it necessary to make the most careful pre-cycloplegic test in order to see what the eye can do and what it will accept under natural conditions. By comparing the result with that obtained under the cycloplegic, I feel that I have full data on which to base a proper judgment as to the prescription to be given."

Gardner of Chicago, regarding the practice of eliminating the use of cycloplegics and of correcting the manifest error, said, that, in his opinion, 'it lacks the main elements of true scientific work. It is true,' he says, that it has received the conditional sanction of some of the great masters, but somehow, the sanction does not seem to harmonize with the precepts elsewhere given in their books. Again, he feels that the only things that can be said in its favor are that it pleases a certain class of people, by catering to their prejudice against the use of "drops," and that it is a quick and easy way of disposing of the case. But it should ever be borne in mind that in neglecting to ascertain the total error of refraction, the work is transferred to the field of conjecture. If the patient is 40 or more years of age, this field has become so limited, that one can fearlessly venture to estimate its boundaries, but in children and persons under 35 years, the manifest error gives no certain indication of what may remain latent.

In the moderate and high degrees of hypermetropia, the accommodation that masks the latent part of the error, taken in relation to the convergence necessary to maintain singular

binocular vision, is responsible for most of the disturbances that bring the patient to the oculist. Correction of the manifest hypermetropia simply lessens the struggle of accommodation and convergence by the amount in meter angles corresponding to the dioptric power of the lenses prescribed. Why the normal relations between these two functions should not be at once restored as far as they can be with glasses, is a question that the advocates of this method of refracting have never answered satisfactorily.

Pyle, of Philadelphia, always uses a cycloplegic in the examination of the refraction unless contra indicated by age or disease.

Stahlman, in a paper read before the Medical Society of the State of Pennsylvania, stated that in going over his year's records he found only 2½% manifest refractions that were not changed after cycloplegia was induced.

The above statements, in no uncertain way, favor the use of cycloplegics in refraction. I was unable to find here at the library an article or paper written by any recognized authority on ophthalmology who was opposed to the general plan of first determining the static refractive condition, although there are some who confess that they do more or less manifest refractions before the age of presbyopia.

Bishop Hannon wrote, that, "given unlimited time, much skill in handling children and in the use of the mirror, it is often possible to make a good retinoscopy without a cycloplegic; but the most experienced will agree, that, even under the best conditions, the results so obtained, are open to doubt."

The foregoing is largely a series of arguments in favor of the use of cycloplegics; it is now only fair to review the objections urged to the use of them, and I can do no better than to quote Duane,—in stating and replying to these objections, as follows:

(a) "A cycloplegic is useless, since the refraction can be determined sufficiently well without it. But this is contrary to my experience. In many and many a case, not only would I have failed to determine the full correction, but, what is more to the purpose, would have failed to determine the glass that gave the patient comfort, unless I had used the cycloplegic.

(b) The cycloplegic often fails to show the

true refraction. But, this again, I can not corroborate from my experience, if cycloplegics are used in the proper strength and if their action is checked by the accommodation tests in the usual manner. Once in a while the tests are contradictory or unsatisfactory under homatropine. This may be because the range of accommodation remains too high. We discover this fact from our accommodation tests. In such cases I use atropine. But this occurs quite exceptionally. In the great majority of cases, homatropine has proved itself in my experience, reliable, giving complete and satisfactory cycloplegia, although it may, at times, perhaps, fail to disclose a quarter of a diopter of hypermetropia.

(c) A cycloplegic is dangerous because it may produce an acute glaucoma. This has happened to me once in my entire experience. The danger, in fact, is about as great as that of being injured in a railroad accident. Furthermore, an eye which develops glaucoma under a cycloplegic, is an eye, which is going to develop glaucoma anyhow. It is not an unmixed evil then, if it develops it right before our eyes. We can usually control the increase of tension with eserine, or failing that, with a paracentesis and then do the iridectomy that such a case should in any event have.

(d) We do not prescribe the glass we find under a cycloplegic, so why use the latter? By using a cycloplegic, we have found the absolute static refraction of the eye. Whether we shall prescribe the glass which fully corrects this or not is a question to be determined by various considerations, but at all events, we have found the basic facts in the case, on which to build our result by such addition or subtraction as seems proper. We might as well say, "We are not going to give a presbyopic patient his distance glass to read with; why then find his distance glass at all?" But we know, that, even if we are not going to give a patient any distance glass, it is necessary to determine with accuracy and thoroughness the exact amount of error in each eye for distance, and then using this as a foundation, determine the added correction that the patient needs for near."

To me, it seems that the most potent reason why the oculist is dissuaded from determining the static refraction in all patients, except, of course, presbyopes, is, because of the prejudice,

real or fancied, which the patient has to the use of the so-called "drops," because some have asked me if the drops do not sometimes cause blindness. In such cases, I explain in as simple a way as possible why the drops are used and in very few instances have the patients remained prejudiced against the drops.

What is the basis of this fear of the cycloplegics? There have been cases reported, in which delirium, dermatitis, dryness of the throat, etc., followed these instillations, but the number has been but few and the symptoms have never been alarming so far as I have been able to learn. We, as physicians, know that certain persons have idiosyncrasies to certain drugs, therefore, we should expect that there are some who are susceptible to these as well as to other drugs. Personally, the only symptoms I have ever seen were a flushing of the skin and dryness of the throat.

BOOK REVIEW.

EXOPHTHALMIC GOITER AND ITS NONSURGICAL TREATMENT. By ISRAEL BRAM, M. D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia, Pa.; Physician on Visiting Staff of Philadelphia General Hospital; Member of the Society for Study of Internal Secretions, etc. St. Louis:—C. V. Mosby Company, 1920.

The author very frankly states in his preface that the unusual part of the book is that dealing with the *non-surgical* treatment of the disease. The last 172 of the 400 pages are given to the discussion of this phase of the question and to illustrative case histories. The first part of the book, which deals with the anatomy and physiology of the thyroid and the pathogenesis, symptomatology and diagnosis of exophthalmus goiter, cannot be recommended conscientiously as an up-to-date treatise on the subject. The best of the recent work on thyroid disease is not fully described and many important phases of the subject are barely mentioned. There is too much quotation from other writers and too little clear-minded correlation of essential facts.

As to the author's ideas regarding non-surgical treatment, there will be found very few among the students of thyroid disease who will agree with him. Non-surgical treatment, as he describes it, includes well-known principles of rest,—mental and physical,—and psychotherapy, plus quinine hydrobromide and various other drugs, electrotherapy of various sorts, and local applications over the gland. The application of the Roentgen ray is mentioned. The case against surgery is but weakly argued and most of the statements are iconoclastic and unconvincing. On the whole the book is not to be recommended.

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EDITORIALS

"LAFAYETTE, NOUS VOICI."

The famous speech of General Pershing,—
"Lafayette, we are here"—a model of force and brevity, and filled with promise for the future, stamped the speaker as a man of actions, not of words. If true of the soldier, what of the doctor? The writer remembers hearing a colleague, called upon for an address at a non-medical meeting, avow that as a doctor he was by profession a man of deeds and no speaker—but lacking the rare judgment of the general he

proceeded at some length to demonstrate the truth of the latter half of his assertion.

The profession is justly proud of those of its members who have achieved success in the field of literature—John Locke, Sir Thomas Brown, S. Weir Mitchell, Sir William Osler and many others. But is it sufficiently ashamed of the apparent illiteracy, the awkwardness and puerility and the carelessness expressed in the writings and addresses of a large and, we dread to say, an increasing percentage of its rank and file? Do we wish to relinquish our claim to being one of the learned professions? It is true that we cannot all be literary men of the

first order, nor can we all discuss literature and the classics with the most erudite of our patients; but we can all, we trust, by a little earnest effort, learn to express ourselves with an approximation of what "unity, coherence and force" upon which our teachers of rhetoric were wont to insist. Think of the fate of the average original article which we contribute to our medical journals if it fell into their merciless hands!

Is it not too bad that a course in the preparation of medical papers and addresses is not included in the modern medical school curriculum? "Lafayette nous voici." When the general said that he *stopped*. How many men at our medical meetings know how to stop? How often a man rises in discussion with but one small idea to contribute, and after a lengthy preamble of nothing in particular and endless repetition of his one idea in various aspects, concealed in weak sentences beginning, "I think" or "It seems to me", sits down ten minutes after his long-suffering colleagues have forgotten what it was he rose to talk about.

As to original articles and addresses, is it too much to ask of a man that he try so to condense and correlate the ideas, that he may deliver them forcefully, concisely and sufficiently completely in a half hour? Few of his hearers will follow him beyond that point, whatever the nature of his subject matter.

PRESCRIBING BY NURSES.

The State Board of Health should exercise a more stringent scrutiny of the activities of nurses employed in industrial plants. No one would question the value of the nurse in attending to the minor injuries sustained by workmen in our industrial plants, but beyond this she should not be allowed to exercise her prerogative.

It has come to our attention that a nurse employed in one of the large industrial plants in this State wrote a prescription for an external wash and gave it to a workman telling him to get it filled at a drug store. The druggist refused to fill the prescription because it was not written by a physician, but he also noted that the prescription called for the drug to be used in a strength twice as strong as ordinarily used, and such as might produce a burn on the skin. When the workman returned to the nurse with the story that he could not obtain the pres-

cription, he was ridiculed and the druggist came in for a share of the nurse's rancor.

Such a patent violation of the Medical Practice Act calls for action on the part of the Board charged with the enforcement of this Act. Unless this Act is strictly enforced we may expect a serious and lamentable accident which will call forth much deserved criticism.

TUBERCULOSIS IN RHODE ISLAND.

Professor C. E. A. Winslow, Professor of Public Health of Yale Medical School has recently made a tuberculosis survey of the State under the auspices of the Rhode Island Tuberculosis Association. The results of this investigation has been printed and should be read by every physician in the State.

The report points out that the death rate from tuberculosis (all forms) is much higher than it should be. The number of deaths in the State exceed by 20 per 100,000 population the rate for the registration area of the United States. More concretely there are 120 more deaths here than there would be if the rate here was as low as it is among 75,000,000 of the population of the United States.

The actual number of cases of tuberculosis in the State is more than 6,000, more than 2,400 of which are in Providence. Yet during the past nine years for every 118 deaths there were reported to the State Board of Health only 100 cases.

It is quite evident from the report that while the number of hospital beds for tuberculosis patients here is fairly adequate, they are not being fully utilized, about one-third of the beds are empty.

There are tables to show that the percentage of incipient cases sent to the State Sanatorium is only 5% while in one Connecticut Sanatorium 22% are incipient. It naturally follows that the percent of arrested cases discharged from the Sanatorium is much smaller.

While Providence possesses the best anti-tuberculosis program the death rate is higher than any where else in the State. This high rate is partly explained by the composition of the population, its crowding, and many industrial establishments yet it is quite evident that the problem is far from being properly solved.

The provision of special physicians, nursing, adequate financial help, education and other preventive measures must be more generous and better organized. There can be no question of this, yet this will fall short of desired results unless the physicians of the State back them up and cooperate in every way.

It is usually the general practitioner who first sees the patient and it is quite evident they are not diagnosing tuberculosis (pulmonary) early enough. Too much reliance is placed on a positive sputum for diagnosis. When such a report is obtained it is probably too late to expect the disease to be arrested. One examination of a patient is not enough and if you are in doubt don't hesitate to call in the help of a fellow practitioner or a clinic physician. When a patient consults a physician for symptoms which might suggest tuberculosis, and early diagnosis may have to be based largely on symptoms, it is not enough to tell him that he has not tuberculosis, he should be given a proper explanation or diagnosis. By taking this attitude physicians will make fewer mistakes. Will you help in this campaign against a disease which is the cause of more than 10% of the deaths in this State.

PHYSICAL REMEDIES.

A great deal has been written recently about physical remedies, and the work done in the army during and since the war more than bears out the importance of their use. Men who came into the hospitals with joints stiffened from prolonged splinting during transportation from the other side, and from various other causes, were almost invariably cured in from four to six weeks by some form of heat, either whirlpool or other baths, or radiant heat, followed by massage and mobilization. Of course there were exceptions. Where the joints had become too firmly ankylosed there were failures, but it was surprising to see what could be done with an apparently hopeless joint.

The young women who were trained to do the work were exceptionally intelligent and efficient, and their training and ability was remarkable. The interest they displayed in their work was one of the most pleasing features of army life. They treated from ten to fifteen cases a day, and it is hard work both mentally and physically.

Electricity entered into the treatment to some extent though it was used mostly for diagnostic purposes.

Some very ingenious pieces of apparatus were made for purposes of mobilization, by the patients themselves in the curative work-shop, and by the enlisted personnel of the Medical Detachment. Apparatus was also made in the same manner for measuring progress in the range of motion.

The Base Hospital in which much of this was observed was not intended originally to take care of this class of work, and as the overseas wounded arrived daily in numbers of a hundred or two for several weeks, and consisted largely of bone injuries, the apparatus had to be improvised.

It only went to show what could be done in an emergency, and the lesson it taught, applied to similar work in civil life.

The value of physical remedies is to-day recognized by the majority of surgeons, and by many of the insurance companies. Many of the latter having well equipped rooms where the treatment is carried out by a nurse or some other person trained to do the work, such as the "Physical Aides" we had in the army. The work of course, being carried out under the supervision of a surgeon. On the other hand there are still many men who do not realize that their responsibility does not end with the reduction of a fracture.

Though injuries only have been alluded to, the same principles apply to convalescence from disease, such as cardiac cases, and many other conditions too obvious to mention.

VACCINATION.

Preventive medicine was given a great impetus when inoculation with pus taken from a small-pox pustule, was introduced beneath the epidermis, as a protection against infection of small-pox.

The work of Edward Jenner, M. D., of England, in 1798, first made known and showed the value of vaccination and from that time on vaccination was extensively used in all countries. He was at first ridiculed, but later was allowed to practice in a hospital. In a few years France and America recognized the value of this prevention from infection and adopted its use.

The old form of vaccination was the "arm to arm" kind, the scab resulting from a vaccine vesicle of a healthy child was used. This could be readily procured and kept a long time. The humanized lymph is preferred by some. The lymph is taken from a true vesicle from the fifth to the seventh day of its development. Both above methods have their drawbacks inasmuch as infection of the vaccine and at times the source being from diseased persons.

The method of securing vaccine virus now is from farms where cows are kept in a healthy state, all precautions against disease being taken and the inoculation of small-pox into them with resulting vaccinia or cow-pox and lymph from typical vesicles is put into sterile glass tubes or ivory points are dipped and dried. This virus must be kept cold and as fresh as possible and used within a few weeks.

All vaccination should be done under aseptic condition. If the arm is the site chosen, it should be dressed by bandaging lightly so as to be easily removed for inspection and cleansing with a mild antiseptic solution or dry powder.

Vaccination can be done on infants a few weeks old, but unless small-pox is prevalent, better wait two to three years. Children of school age should be inoculated before going to school. Revaccination should be performed at puberty or at any time if small-pox is liable or has become epidemic.

Complications are rare and not serious as a rule. Some skin affections should cause one to defer vaccination until cured or improved.

No one should refuse if they understand the immunity given by vaccination.

It is common that certain parents of school children refuse vaccination, which if they were permitted, and large numbers were not vaccinated, we would in time of epidemic find whole families wiped out of existence by this dreadful disease. Centuries ago China had its deadly experience of small-pox epidemics. Vaccination was its prevention.

A partial extract of our general laws, Chapter 65, Section 14, "No person shall be permitted to attend public school in this State without furnishing a certificate from some practicing physician of being properly vaccinated as a pro-

tection from small-pox. The teacher to keep a record of same.

"Section 15. Fine of fifty dollars or imprisonment not exceeding thirty days for violation of this chapter."

PERSONAL—"TO EVERY PHYSICIAN IN RHODE ISLAND."

The Rhode Island Medical Journal to-day is in need of just one thing, and that is—your interest. It is thriving financially, it is well gotten up, and there is, I believe, a real need for it. There should be on your desk, first of all, two journals, i. e., the Journal of the American Medical Association and your Rhode Island Medical Journal. After these, all the special journals you may be interested to read. To illustrate, I see before me a picture of a beautiful boy aged five years. He is smiling, fat and happy. Why, because his mother took the picture herself. At the far end of the room is another picture of the same boy. It is in an elaborate gilt frame and bears the name of a popular and very expensive photographer. The one has not very much artistic value, there are no high lights in the eyes, there is no attempt at a formal pose; the other is properly executed in every detail, but the first is the picture that stands on the mother's desk.

So with the two journals. The Journal of the American Medical Association is the formal and foremost journal of the day and you can not possibly afford to be without it, but your state journal is also important. It should be of even more interest to you for it should give you news of your own brother practitioners whose problems and joys are much the same as your own. There should be in it a certain friendly intimacy that you would not expect in a national publication. In other words it should correspond to the home-made picture.

How accomplish this result? By individual endeavor—Insist that a goodly number of papers in your County Society, or local club, be by the members themselves, then have it understood that they go to the State Journal. Send the editor clippings and jokes to put in his "Aether and Lavender" department; news of deaths, births, marriages and a thousand items of interest, and above all send reports of cases for the Clinical Department. If these case reports

were coming in from all over the state, the chances are ten to one that your State Journal would be the first opened of all your journals. .

The editor ought to be flooded with manuscript and his editorship should be one series of delightful sessions in getting the material together. As it is—perhaps it is more like the nether region which has been described as a place of high temperature and low spirits. The journal wants your interest and the way to get your interest is to get you to help. Will you? The last argument you could put forward would be that you are too busy. The answer is; Go to your State Medical Library and get a book called "The Life and Letters of Dr. Nathan Smith", and then read it.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

December 6, 1920.

The regular monthly meeting of the Providence Medical Association was called to order by President D. L. Richardson in the Rhode Island Medical Library on December 6, 1920, at 8:55 p. m.

The records of the previous meeting were read and approved.

The applications of Drs. Vernon E. Babington, Benjamin H. Abraham, Joseph B. Webber, and Vincent G. Oddo having been approved by the Standing Committee, it was voted that the By-Laws be suspended; and the Secretary instructed to cast one ballot for all four applicants.

Lester A. Rounds, Ph.D., having been approved by the Standing Committee as an honorary member, was elected by unanimous consent.

A communication from Dr. Arthur H. Harrington was read, calling to the attention of the members the Mental Hygiene Sessions of the State Conference and Social Welfare to be held in the Medical Library on December 9, 1920, at 8 p. m.

In accordance with Article I, Section 6, of the By-Laws, the Standing Committee presented the following nominations for Officers and Committees for the year 1921.

President—Frank T. Fulton, M. D.

Vice-President—N. Darrell Harvey, M. D.

Secretary—Peter P. Chase, M. D.

Treasurer—Charles T. Deacon, M. D.

Member of Standing Committee for Five years—D. L. Richardson, M. D.

Trustee for the Medical Library Building for One Year—A. T. Jones, M. D.

Reading Room Committee—George S. Mathews, M. D., M. B. Milan, M. D.

Counsellor for Two Years—Roland Hammond, M. D.

Delegates to the House of Delegates of the Rhode Island Medical Society—William Hindle, M. D., Albert H. Miller, M. D., Frederick N. Brown, M. D., H. G. Calder, M. D., J. A. McKenna, M. D., F. G. Phillips, M. D., George T. Spicer, M. D., C. A. McDonald, M. D., J. C. Cooney, M. D., W. A. Risk, M. D., George A. Matteson, M. D., J. E. Donley, M. D., J. B. Ferguson, M. D., H. E. Harris, M. D., B. H. Buxton, M. D.

Dr. Charles O. Cooke reported four cases of intestinal obstruction; one due to cancer of the lower end of the sigmoid, another due to hernial constriction of the small intestine, another due to constriction of the small intestine with an omental band, and the last due to intussusception of small intestine through the ileocecal valve into the cecum.

The first paper of the evening, entitled "Hydronephrosis as a Gynecological Problem with Remarks Regarding the Influence of Nephrectomy Upon a Subsequent Pregnancy," was read by Arthur H. Morse, M. D., Professor of Obstetrics and Gynecology at Yale Medical School. Lantern slides were shown of the psychological changes undergone in the kidney. Dr. Edward S. Brackett opened the discussion and Dr. Morse closed it.

The second paper of the evening, entitled "Radical Treatment of Trifacial Neuralgia," was read by Frank McEvoy, M. D., and illustrated by lantern slides. Many points in the surgical technique of Gasserian Ganglion removal were stressed and the subject thoroughly considered. Drs. Lucius Kingman, H. B. Sanborn, C. A. McDonald and J. W. Keefe carried on the discussion which was closed by Dr. McEvoy.

The meeting adjourned on a motion by Dr. William R. White at 10:40 p. m.

Attendance: 102 members and 7 guests. Collation was served.

Respectfully submitted,

RAYMOND G. BUGBEE, M. D.,
Secretary.

January 3, 1921.

The annual meeting of the Providence Medical Association was called to order by President D. L. Richardson in the Rhode Island Medical Library on January 3, 1921, at 9:10 P. M.

The records of the previous meeting were read and approved. The report of the Secretary was read and it was voted that it be received and placed on file. The report of the Treasurer was accepted and placed on file. The report of the Standing Committee was received and placed on file. The report of the Reading Room Committee was received and placed on file.

The President's annual address entitled "The Future Treatment of Disease" was read by Dr. D. L. Richardson.

Following the President's annual address a motion was made and seconded that the Secretary be instructed to cast one ballot for the election of officers and committees as nominated. Motion passed and the following officers and committees were elected for the ensuing year: President, Frank T. Fulton, M. D.; Vice President, N. Darrel Harvey, M. D.; Secretary, Peter P. Chase, M. D.; Treasurer, Charles F. Deacon, M. D.; Member of Standing Committee for five years, D. L. Richardson, M. D.; Trustee of the Rhode Island Medical Library Building for one year, A. T. Jones, M. D.; Reading Room Committee, G. S. Mathews, M. D.; M. B. Milan, M. D.; H. A. Cooke, M. D.; Counsellor for two years, Roland Hammond, M. D.; Delegates to the House of Delegates of Rhode Island Medical Society, William Hindle, M. D.; Albert H. Miller, M. D.; Frederick N. Brown, M. D.; H. G. Calder, M. D.; J. B. McKenna, M. D.; F. G. Phillips, M. D.; George T. Spicer, M. D.; C. A. MacDonald, M. D.; J. P. Cooney, M. D.; W. A. Risk, M. D.; George A. Matteson, M. D.; J. E. Donley, M. D.; J. B. Ferguson, M. D.; H. E. Harris, M. D.; B. H. Buxton, M. D.

Dr. Fulton was escorted to the chair by Drs. DeWolf and Peters.

Dr. Fulton announced that Collation and Publicity Committees would be appointed at the next meeting. Motion passed endorsing petition to the City Council in favor of increasing the amount to be paid to poor and needy families by the Overseer of the Poor up to \$2.00 per capita per week.

The report of the Standing Committee approving for membership Drs. George E. Reynolds, Frank R. McEvoy, Daniel L. Morrissey, Jerome J. McCaffrey and Abe Arthur Brown was read, and by vote the By-Laws were suspended and the Secretary was ordered to cast a ballot for the election of each and everyone of these applicants. Motion passed approving the appropriation of \$175.00 for the Reading Room Committee. It was voted that dues for 1921 be set at \$4.00, also to appropriate the sum of \$300.00 for the use of the Medical Library for 1920. The President announced that a committee to draw up a memorial on the death of Dr. McCaw would be appointed later. There being no further business Dr. B. B. Vincent Lyon of Philadelphia gave an address on "A New Surgical Method of Drainage of the Biliary Tract as an Aid in Diagnosis and Treatment of Gall Bladder Disease" which was an informal presentation of the subject of diagnosis and treatment of certain conditions of the biliary tract by means of the duodenal tube. The discussion was opened by Dr. Halsey DeWolf and continued by Drs. J. W. Keefe and C. O. Cooke. Dr. Lyon closed the discussion.

The meeting adjourned at 12 P. M. Attendance—Seventy-five members and four guests. Collation was served.

Respectfully submitted,

RAYMOND G. BUGBEE, M. D.,
Secretary.

RHODE ISLAND MEDICAL SOCIETY

There will be a meeting of the "Section in Medicine" of the R. I. Medical Society, at the Medical Library, Francis Street, Tuesday, March 22, at 8:45 P. M. A member of the staff of Harvard will be the speaker of the evening. This will be the Annual Meeting with an election of officers.

Section in Medicine meets the 4th Tuesday of each month.

D. FRANK GRAY, M. D., *Chairman*,
142 Broad Street, Providence, R. I.
CREIGHTON W. SKELTON, M. D., *Secy-Treas.*,
266 Broad Street, Providence, R. I.

WASHINGTON COUNTY MEDICAL SOCIETY.

Annual meeting at Colonial Club, Thursday, January 13, 1921, at 11 a. m., Paper: "Disease of the Gall Bladder,"—Dr. Ehlomin of Fall River.

W. A. HILLARD, M. D.,
Secretary, Westerly, R. I.

HOSPITALS

RHODE ISLAND HOSPITAL.

Dr. Walter O'Keefe has been appointed externe to the Medical Out Patient Department.

The new Dental Treatment, Out-Patient Department has been started under the direction of Dr. Albert L. Midgley and Dr. Ernest A. Charbonnel and the following men have been appointed externes in that department: Dr. Louis M. Forbes, Dr. William A. Greenleaf, Dr. J. B. LaFlamme, Dr. Raymond A. Lundgren, Dr. Ambrose H. Lynch, Dr. James F. Mitchell, Dr. Edward C. Morin, Dr. Eli Paquin, Dr. John J. Rouslin, Dr. Joseph Strecker.

NORMAN C. BAKER, M. D.,
Secy. Staff Association.

The regular quarterly meeting of the Staff Association was held at the Hospital, January 10, 1921, at 8:30 p. m.

MEMORIAL HOSPITAL.

The Superintendent of the Memorial Hospital has announced that commencing December 30, 1920, regular weekly clinics in Surgery, Orthopedics, Medicine and the Specialties will be held Thursdays at 9 a. m. at the Hospital.

These clinics are open to the medical profession of the State and they are cordially invited to attend without further notice.

On December 30, 1920, operations were performed by Drs. Frederick V. Hussey and T. Edward Duffee.

On January 6, 1921, operations were performed by Dr. Arthur T. Jones.

The regular monthly meeting of the staff was held January 4, 1921, at 8:45 p. m., Dr. John A. Remington, President of the Staff Association, in the chair. Cases treated during the past month were reviewed by the Staff, and routine business transacted.

The regular monthly meeting of the Staff Association was held at the Hospital, February 3, 1921 at 8:45 P. M.

Reports of cases treated in the various departments during the past month were received and routine business transacted.

ST. JOSEPH'S HOSPITAL.

Staff Conference, Friday, January 14, at 9 p. m., Out Patient building. All members are expected to attend these conferences.

GEO. F. JOHNSON,
Secretary.

ST. JOSEPH'S HOSPITAL STAFF.

Regular Monthly Conference, Friday, February 11, at 9 p. m., Out Patient Building.

GEORGE F. JOHNSON, *Secretary.*

ETHER AND LAVENDER

DISSERTATION ON BRAINS.

Definition.

- (1) The explanation of identity.
- (2) A culture media for the propagation of thought (of varied types;—sometimes it's science, sometimes it's money, sometimes it's yeast, but at all times the results seem to satisfy the owner.—Ed.)

Brains are a semi-solid gelatinous substance of about the consistency of a well cooked tapioca pudding, possessed by many and useful to most; anatomically situated in the top end of a man, the forward end of a cow and almost anywhere in a frog.

It abounds in convolutions, corrugations, humps, hubbles and creases and is set forth as the abode in which is locked reason, intelligence, morality, invention and sundry other tendencies, the incarceration being in some, so complete that

the escape of any of these is altogether defeated.

Of its conglomerate tenantry, the one that is conspicuously and perniciously active is the element ego, which is an exaggerated form of self-esteem and has upon scientific investigation proved to be due to the activities of a bewildered air bubble; said bubble is somewhat less active; however, since July 1, 1918, when the thirst department went on dead storage.

There is one thing that in greater or lesser degree is common to all brains, and upon it depends happiness, effort and the desire to live—the anchor in joy and the sunbeam in sorrow; typified by the greatest word in the English language,—HOPE—and upon the quality of brains depends whether life is a job or a privilege.

One of the most singular things about brains is that everyone is sure that he is the possessor of the best.

The difference between brains of the human variety and that of the lower animals is that one, by process of educational training has the power of continuity of thought and consecutive thinking; but this must, at times, be proven.

There is, furthermore, a great variety of brains. Some are well regulated and trained and have the capacity of unscrambling tangles, some are light and fluffy and some are soggy and some are dense and some are deliberate. The first belong to people whom we call "smart," the next get the same reputation by reason of mental agility, and the ability to detect snares; great thoughts no doubt, dart thru them, but meeting no resistance leave no trail. The next being alone capable of phonographing a stolid expression to the eyes endows the possessor with the look of a sage and he poses as a wise man. The deliberate always scores a bull's eye, but the dense is dentless in the maze of thought and is often the victim of mixed signals as illustrated in the following which took place in a court-room; the case was one of assault: "You say," said the attorney, "that you both saw and heard the blow struck—where did he hit him?" Ans.—"Right between the house and barn." "Is that so; what did it sound like?" "It sounded like a man looking 'into a winder,'" replied the muddled and horney-handed son of toil.

But to return to the classic: certain varieties of the bovine species are held by some perverted people to be edible, the belief probably being the primitive relic of cannibalistic usage, when they were cooked "*en casserole, au naturel*."

Now digest this: No man living can remember when folks didn't have brains.

HISTORICAL NOTE.

(Time ain't when brains wer'n't.)

SPECIALIST.

A man dashed into the doctor's office with blood dripping from his hand. "Oh! doctor help me, I've smashed my finger all to pieces." "Which finger is it?" asked the doctor. "This one," holding out the index finger. "Go to Dr. Blank two blocks further on, I am a middle finger specialist."

DIET.

"The trouble with you, Patrick, is that you don't eat enough animal food; change your diet somewhat and come back in a week." A week later. "Patrick you look worse than you did before; what yer been doing?" "Oh! It's that blasted animal food," said Pat, who drove a tip cart. "I could ate the corn and oats alright, but the chopped hay played h— with me gums."

BOOK REVIEWS

THE FUNDAMENTALS OF HUMAN ANATOMY, Including Its Borderland Districts from the Viewpoint of the Practitioner. By MARSH PITZMAN, A. B., M. D., Professor of Anatomy in the Dental Department of Washington University, St. Louis: St. Louis, C. V. Mosby Co.

This book, the author says, is an attempt to teach anatomy from the point of view of the practitioner, not as a pure science. He points out that even the advocates of the other view usually touch on the function of muscles which is physiology, discuss rupture, which is pathology and branch out to a small extent in numerous other ways; and the newer anatomies bringing in all border line discussions have grown to the size of encyclopedias, which no intelligent individual ever reads through.

The author intends to "teach more by not attempting to teach too much," and when possible to introduce logic to take the place of memorizing. He has produced a comparatively short and easily readable anatomy, but one that is sketchy and elementary.

Many of us read Dicken's "Child's History of England" in our youth and enjoyed the anecdotes and cleverly narrated tales of the striking incidents in British History. But those who later took courses in history may question how much of the true significance they got from Dickens. Similarly a class of nurses might find it easier to get some anatomy from this book than from Gray, but a medical student in the dissecting room sorting out the structures of the axilla, or a surgeon trying to suture half a dozen severed tendons in an injured wrist would probably consider this book a very unsatisfactory help.

There are 343 pages with large type and good margins. The illustrations are of the most pronounced diagrammatic type. In comparison with them the pictures in our standard anatomies are of photographic accuracy. Most of the text deals with regional anatomy which is nearly all gross. The first 54 pages are a systemic anatomy, practically all histology. Then scattered through the book is considerable embryology. Occasionally surgical problems are considered as the proper opening of axillary abscesses, the pathology and treatment of ischio-rectal abscess and fistula in ano, perineal tears and prolapse of the uterus, etc. All this shows that in considerably less space than one of the two volumes of Cunningham's Dissecting Manual the author has attempted to cover the essentials of Human Anatomy with its relationships. It can't be done. Such a pleasant homeopathic dose hasn't the required potency for grown-ups.

HYGIENE DENTAL AND GENERAL. By Clair Elsmere Turner, Assistant Professor of Biology and Public Health in the Massachusetts Institute of Technology; Assistant Professor of Hygiene in the Tufts College Medical and Dental Schools. With Chapters on Dental Hygiene and Oral Prophylaxis by William Rice, Dean, Tufts College Dental School. PP. 400. Price \$4.00. St. Louis: C. V. Mosby Company.

This book is written primarily for the dentist in order to give him a comprehensive and fundamental knowledge of general hygiene. It is a recognition of the new conception of dentistry—that it can no longer be concerned with the oral cavity alone, but must extend its interest, at least, to conditions of health and disease throughout the body. For this reason the dentist must be familiar with the principles of hygiene as related to the entire body. The book is comprehensive in scope, although compressed into a small volume. Each subject is adequately treated. The hygiene of the body is well discussed in several chapters with especial refer-

ence to dental hygiene. The wider aspects of communicable diseases, public health administration, food control, water supply, sewage disposal, school and industrial hygiene, ventilation and disinfection are reviewed in separate chapters. The book is carefully written, well illustrated, and can be read with profit by the intelligent part of the laity as well as by the medical and dental professions.

PRACTICAL DIETETICS WITH REFERENCE TO DIET IN HEALTH AND DISEASE. By Alida Frances Pattee. Thirteenth Edition. PP. 502. A. F. Pattee, Publisher, Mount Vernon, N. Y., 1920.

Any text book which has passed through thirteen editions may fairly be said to have gained a deserved reputation among its particular clientele, and the present book is no exception. The present edition has been brought up to date by the incorporation of the latest researches in dietetics, and embraces the latest diets of leading physicians and hospitals. This text book for nurses contains several introductory chapters on the principles of nutrition and the preparation of food for the sick. Then follows an interesting collection of recipes which would delight the heart of a dietaries of hospitals and certain well known specialists in various diseases and disorders of nutrition. The diet in motherhood, infancy, youth, adolescence and old age are briefly touched upon. On the whole the diets in special disorders are well chosen and up to date. We note with regret that the diet in chronic rheumatism does not follow any recognized authority but contains the long discarded and age old dictum to avoid red meats. Exploded theories die hard. The book otherwise attractive is marred by the inclusion of a long series of advertisements of food products, shoes, water filters and abdominal binders. As a stimulus to popularity a pamphlet of State Board Requirements in Dietetics and State Board Examination Questions in Dietetics is given complimentary with each copy.

NOTICE.

Through the courtesy of a reliable authority we learn of a resolution passed by the Town Council of New Shoreham, asking assistance in securing a resident physician for that town. If our information is correct, there were three physicians there previous to the war, and report says that all did well. With a resident population of twelve hundred, very largely augmented during the summer months, one or two drug stores and practically no competition, it would seem well worth the while of some physician who is not already firmly established, to give this opportunity his consideration.

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ORIGINAL ARTICLES

THE LIGHT FROM UNDER THE BUSHEL.*

By CREIGHTON W. SKELTON, M. D.,
Providence, R. I.

My inspiration for a title to this paper was conveyed to me by a paper read before this Society by Dr. William McDonald, Jr., whose subject was "The Light Under the Bushel." I recall the fact that he advocated to the members of this Society to take "your lights from under the bushel." I have done so in the hope that you may see the light as I have seen it.

This paper is pregnant with vital interest to every fellow of this Society. In my conversation with members, I find that others have had the same experience that the first part of this paper deals with. I hope it will provoke a thorough discussion.

Time exhibits some curious traits which are well worth observing. Tycho Brahe, an astronomer of the fourteenth century, saw in the constellation of Casseopea, a star break into such sudden splendor that its brilliancy was seen in the noon-day, and, like the astronomer of old, we have with us now, the industrial nurse whose light so shines that its brilliancy is seen also in the noon-day, but this light must be replaced under the bushel where it rightly belongs, there to repose permanently.

For nearly seven years I was in charge of the surgical work at the Gorham Manufacturing Company's plant, whose insurance is carried by the Traveler's Insurance Co. through Starkweather and Shepley. I was not on contract work, charging regular fees, and made daily visits to the plant until about one year ago when I omitted Tuesdays and Thursdays. The reasons thereof you will

see later. Having studied law for some time, I handled all the compensation cases and became thoroughly familiar with the Working Men's Compensation Act. I had a stenographer and a first aid man, and continued along these lines until February 8, 1919, when my first aid man was supplanted by an R. I. H. graduate nurse. She had done some nursing in the family of the adjuster for the Traveler's, and also in the family of one of the vice-presidents of the company. She was given full charge, taking over all compensation cases. After she had been on the job for several months, I found that the work did not require my daily visits to the plant, and that the number of cases coming under my observation were growing smaller each week. I then decided to do some detective work to ascertain the cause thereof. I kept an accurate card index of the cases I treated, and it was not long before I discovered that the nurse was holding her own clinics early in the morning before the stenographer or myself arrived. I found that she had treated in forty days twenty-two cases and from two to twelve dressings in each case. *These cases were never reported to the insurance company or to the Gorham Company.* It was not long before her wages were raised, and the company sent her a letter commending her on the low number of accidents they were having since she had taken up the safety work. As a matter of fact, our accidents had increased. It was a common thing for me to have four or five stitching jobs a week, but during my last four months of service I saw but one case.

I promptly brought this matter to the attention of the work's manager, who consulted the insurance company about it, with the result that I received a notice from the work's manager that another doctor would take up my work the next day. This notice was given to the nurse to hand to me. Her guilty conscience prevented her doing so. She placed it on my desk

* Read before the Rhode Island Medical Society, March 3, 1921.

and went home for the day. I told my stenographer to open it as I knew its contents. I took the whole matter up at once with the Secretary of the State Board of Health who called Colonel Webb in consultation. Two months after, an inspector from the board interviewed me. I furnished him with a list of names and addresses, and the number of treatments in each case. In a few days he returned and made the following statement to me: "Doctor, that nurse is a bad one and we will make an example of her." I have been told that the nurse, the work's manager and the doctor, were up before the Secretary of the board, that the nurse was told her duties, and that ended the incident. She is still on the job. Accidents that numbered from thirty to forty a few months ago, have jumped to over seventy in her January report of this year. She is reporting all accidents now, as she did following my first complaint against it, but it was not long before they became subnormal again.

Last year the State Board sent out a letter to all nurses in factories telling them their duties. The day following the receipt of this letter instead of my treating from four to five cases, I treated twelve and they ran over ten daily for the next week. A letter was immediately sent to her from one of the vice-presidents, asking her to account for the great increase in accidents. This letter floored her, but after consulting the work's manager she was able to answer it.

Let me *cite* just one cunning trick of this artful nurse. One Friday afternoon a man walked into the First Aid Department, and asked to have a clean bandage put on his arm. I dressed him but asked him no questions, but instructed him to return the next morning at eleven o'clock. After dressing all the cases that were on the cards for the next morning, the nurse informed me that all had been in, and that I was at liberty to go. I drew her attention to the man with the second degree burn that I had bandaged the day before. She promptly informed me that he had left the factory for good. I immediately sent into the factory for him. He informed me that the nurse came out for him at 7 a. m. and dressed him in the First Aid Department. This she had been doing for over a week. The next ten days following I dressed him at my office on

Broad Street. I could talk to you for an hour on this nurse and her work, but time will not permit.

Conditions at the Gorham Plant are interesting. There are two societies employing two doctors. If an accident happens to a member, and he goes to the society doctor for treatment, the doctor makes out a bill when through with the case. This is sent to the insurance company, and in time a check is returned made payable to the doctor. He endorses this check and leaves it in the First Aid Department. It is then sent to the treasurer of the company, who deposits it. The company requires this, claiming that the doctor receives his pay in the \$2.00 per capita from the members of the society.

MORE LIGHT. Mr. C. W., age 32, married, came to my office a few months ago with an infection of the index finger of the right hand. He is employed at the New England Butt Company on Pearl Street, whose insurance is carried by the Manufacturer's Liability Insurance Company of New Jersey. After questioning him at some length, I found that his injury was of five days duration, that he had been treated by the nurse at the Manufacturer's Liability Hospital on Custom House Street, and that she had opened the wound twice and dressed him four times without a doctor seeing him. On his last visit she instructed him to return at ten the next morning, so that the doctor could see it. He reported that night at my office. I promptly made a free incision, sent him home for some soaks, and he made a complete recovery in a week. Here was a case where the nurse thought the infection was getting the better of her, and instructed him to return at a given time, so that the doctor could take charge of the case.

MORE LIGHT. Mr. A. L. P., age 49, married, employed at the Universal Winding Company, came to my office a few months ago with an ulcer of the right cornea and with the following history. In the course of his employment he was struck in the right eye with a hot chip which produced a burn. He went to the First Aid Department for treatment and the nurse in charge treated him for three weeks when he became discouraged and came to my office. I promptly sent him to an Eye man, who treated him for three weeks longer, when he

was able to return to work. A few weeks later he again came to me with a conjunctivitis, after the same nurse had treated him four times. I sent him to an Eye man with the history of the case, in the hope that I might see an article in the Medical Journal on it, but my hopes were blasted.

MORE LIGHT that is interesting. Mr. J. F. S., age 36, married, employed at the American Hand Laundry as a washer. The second finger of his left hand was caught between cog wheels and badly crushed. I saw him seven days after the injury. After questioning him closely I found that his employer sent him to a woman three doors below the laundry on the opposite side of the street who washed the finger and put some ointment on it, and she treated him daily until I saw him. He stated that she was not a trained nurse, but had done nursing. I requested that he allow me to report it to the State Board of Health. This he refused, saying that he would lose his job, and he paid me for my treatment. This case I followed up, and found that she had treated him four days longer.

In the home city of the Secretary of the State Board of Health, there is a factory that requires a nurse to handle all cases to recovery. No doctor should be called unless for serious injuries, and no doctor is in attendance, (The Traveler's Insurance Company carry this insurance.)

I have given you the history of these few cases, because they stand out so conspicuously. I could give you many similar ones, for I have the records of them at my office. However, this suffices for all intent and purposes. One can readily see how rapidly the industrial nurse is supplanting the doctor. Why this is so, it is an easy matter to understand. It means less medical expense, which in turn means a lesser premium on insurance, less work at the plant, and less work at the insurance office, for these cases that the nurse treats are not reported. This is the condition of affairs in Rhode Island factories. Why is this permitted? I will answer that question with the following quotations from two daily papers. When Wilson was running for the Presidency, the Los Angeles Times came out with the following announcement: "Luther Burbank is out for Wilson." The New York Herald, picking it up editorially, asked, "Isn't

the Author of the Spineless Cactus?" Let us hope that the health authorities will not simulate a Luther Burbank, and that this evil will be corrected.

This old State of Rhode Island should pull away from its antiquated form of government. What we need is a Commissioner of Health to supplant the State Board. He should have one or two Deputies with spines worthy of their owners. We should have a Board of Medical Examiners. They should be appointed by the Governor upon approval by this Society. So much for the industrial nurse and the State Board of Health.

Now to bring out some of the lights that are hidden under the bushel. This cannot be done by the use of the Green Cross. It is a meaningless emblem. Horse doctors and osteopaths, homeopaths and chiropraths use it ad libitum. I would urge that you supplant it with the caduceus, the real emblem of the American Medical Association. I have never used the Green Cross, the Red Cross, the Black Cross, or the Iron Cross, but like most of you, I have been double crossed.

What this old Medical Society needs is a few more men who are not afraid to relieve their minds when the occasion requires, who are fearless in the cause of right; and we have such, who have been the means of creating some life in the meetings of this Society during the past few years. We need more of that old sterling, unswerving, moral principle, and the independence to stand back of it. We should cultivate that friendship, which not only flourishes in the sunlight of prosperity, but is most devoted amid the darkest clouds of adversity. We should put away those little petty jealousies that mar and dwarf our happiness, that "stingeth like an adder."

Only recently, during a discussion on radium, at a Providence Medical Association meeting, a speaker referred to a surgeon's use of radium in an unkindly way. It would have been far better had it been left unsaid. It leaves a bad taste. One of the most difficult problems that has confronted the Presidents of this Society is to secure local talent to present papers before it. This difficulty has existed for years. It should not be so. We have some brilliant talent and splendid geniuses in the membership of this

Society and their lights should be brought from under the bushel.

One of the best meetings of this Society in recent years, was held last September at Butler Hospital. The discussions that followed the reading of Dr. C. O. Cooke's paper was well worth the effort to be present. It made me feel as if I were at an Academy of Medicine meeting, or a New York State meeting, where it is a common sight to see half a dozen men on their feet at once following the reading of a paper. Such meetings should continue. We have as good men in medicine and surgery in this little state, as in any state of the union. All we need is some mighty wand to swing its powers over their heads, to have them bring their lights forward. Woonsocket, Pawtucket and Newport should furnish us with a paper now and then. In Providence, men who are on the staff of large hospitals have the opportunity of observing unusual cases. They should collect them and present them to this Society so that their less fortunate brothers in distant parts of the state may learn something new. Surely we all are athirst for knowledge and are anxious to see some lights brought forward. So in reverie at the fire-place I have planned to relieve the anxiety of the incoming Presidents for the next few years.

Let us have a paper on the Management of Diabetes and Nephritis by men like Mathews, Henry Cooke, Fulton, Gray, and others. A paper on the Modern Treatment of Genito-Urinary Diseases by Kerney or Corrigan. One on Diseases of the Lungs by Perkins. A paper on some don'ts in the Management of Pelvic Conditions in Women by Higgins, Brackett, or Pitts. Some don'ts in the Management of Acute or Subacute Surgical Abdomens by Keefe, Smith, Munro, McGuirk, Jones, Gardner, Hollingworth, O'Connell, Cooke, Hoyer, Matteson, McKenna, Cutts, Beckett, and many others.

A paper on Internal Medicine by DeWolf, Fulton, Gray, Mathews. One on Blood Pressure by local medical examiners like Welsh, White, Lovewell, and I am sure there are others.

Someone has paraphrased the old biblical saying, "Man that is born of woman is of few days and full of microbes." Then a paper by Sawyer would be well worth the effort. The Laboratory by Rounds would be instructive. It might

be timely to have some criticisms of the profession as a whole by Chapin. He can do it, and I think we need it. Have Peckham, Danforth or Hammond tell us what not to do in fractures. Let us have a paper by Utter, Calder or Jordan. The general man is interested in knowing how to feed the babies. Tell us why modified milk is not always first choice over Mellin's Food, Horlick's Malted Milk, Nestle's Food, or Park Brew.

Let the eye men not lose sight of the fact that the general man is interested in the treatment of conjunctivitis and iritis. Give us the status of argyrol over AgNO_3 and why H_3BO_3 is useless. Also tell us, why it is, that so many people go to the opticians, even to Woolworth's, for examination and glasses. Fitzgerald should come before us and tell us why our sphincter ani gets out of "kilter," and how to make it functionate properly. Carver, Partridge or the g-y-n men should give us some points on the management of a face or a breech presentation. Donley, Shattuck, McDonald, or Sanborn, should give us a paper on "At What Age We Should Begin to Avoid Senile Dementia." A paper on the Early Differential Diagnosis of Eruptive Diseases by Richardson would be appreciated. Cummings should tell us how to feed a Diabetic, a "Bright's," an arthritis deformans, or the diet in obesity would be interesting. Mayhap a paper by the Corner Stone of the Society would not be amiss. Now that suffrage is here she should talk, or has she become hardened by affinity with Hardman.

Let the x-ray men show their light, and let not the Otologist forget that the general man is as much interested in otitis media as he himself is. As a diversion a paper by Garvin on Single Tax would be entertaining. You could play safe by limiting him to thirty-five minutes. Griffin should give us a paper on his experiences as Police Surgeon, Medical Examiner, or on expert testimony, or a paper on his experiences as dispensing officer to the Knights of the Hollow Needle, would be mighty interesting. A paper by Harrington on some unusual cases that have come under his observation at the State Institutions would be interesting. If this subject should not be to his liking, then he might tell us of his troubles. Go after Blumer for a paper on his experiences at Utica. Have him tell you

about the different employments that the patients were given there, in the various shops at the State Hospital. He can do it, for I have been there and I know. It would be interesting.

Let us have a symposium now and then, by four or five members, of ten or fifteen minutes each, on such subjects as pneumonia; chronic arthritis; dermatology; neurology; G-U. diseases; nephritis; and diabetes; and don't lose sight of the fact, that one on auto-intoxication may prove mighty interesting, and that syphilis would run a close second. Let us have a good Medico-Legal paper by some shining light of the bar. A good Dental paper as related to medicine, or have the D. D. S., tell us when not to recommend the extraction of good teeth, this should open a good discussion. A criticism by a first class Pharmacist might bring out some lights that I have overlooked.

Those who win the spurs should wear them, and some of our Past Presidents are too conspicuous by their absence.

I am glad that Geo. W. Gardner of Union Trust fame is going to talk to you on the economic conditions of the day. I hope that he will dwell a minute on stocks. We are so frequently visited by the silver tongued young orator, with a roll top desk in the Turks Head Bldg., and a hole out in Arizona, that it may be timely and do us some good. I have seen, within the last few years, enough stock in four doctors' offices, that is so valuable, in-so-much, as it would paper every room in the Old Ladies' Home.

This stock was of the Blue Bird variety, but after it warbled a few notes from the doctors, it never even hummed except in a night mare.

In closing, I want to urge you all to be ever on your guard, let nothing swerve you from the line of duty, keep your eyes on the legislative enactments at the State House, if you do not, some insurance company through some shining light of the bar, will slip one over on you. Watch the Workingmen's Compensation Act, and every other act, that effects you as a whole. I urge you again, to be ever on your guard, for I see the hand writing on the wall, just as clearly as Hamlet told Horatio, he could see his father with his minds eye.

Such a program as I have outlined to you for the next few years, should bring out our rural

membership to a man, and I am sure it would be more than appreciated by every fellow of this society. It can be done. Bring your lights from under the bushel, and let them so shine before others, that their brilliancy may be seen even in the noon-day.

SOME IMPORTANT FRACTURES FREQUENTLY OVERLOOKED.*

By JACOB D. KELLEY, M. D.,
Providence, R. I.

It is the custom and has been for many centuries when violence has occurred, to consider the possibility of fracture of any of the bones in or about the part which suffered the violence. On the other hand we are too ready to dismiss the possibility of fracture, if certain cardinal signs do not present, often forgetting that when gross displacement and damage has not happened, cardinal signs are slow in developing. Too often does the profession coddle itself into believing that the finger and the touch can sense the difficulties and often the fear of loss of the case from either the Roentgenologist taking charge, or the asking of the patient to spend money for better knowledge and so better treatment, may delay their own pecuniary payment. Are we not often too selfish for the patient's good? Let me say here: I know that patients who received the best care, get excellent results, are thankful and appreciative and the best advertisement to the medical man who cares for them. The information gained by X-ray study gives an almost positive knowledge of the bony structure of the body and for that reason alone, if no other, should be earnestly sought. Altho other making of the X-ray picture, the roentgenogram, is not difficult, the interpretation of them is quite another matter, requiring a special training, a good knowledge of anatomy, the knowledge of the normal as against the abnormal and question of balance, angulation and a fertile imagination, in other words X-ray experience. What I have to show you this afternoon is what in an experience a Roentgenologist has to do in assisting moral courage to stand by conviction of judgment believing either there is, or there is not a fracture and open-mindedly being ready to be convinced.

*Read before the R. I. Medico-Legal Society, January 27, 1921.

There are some fractures so common as to be passed by; and just how awkward it is, two or three weeks later, to be forced to obtain "further information," at a time when such knowledge is often worthless. It is in all fairness of purpose and desire to assist and not to criticize that apparent short-comings of judgment are presented, and with a fixed hope to increase our courage as medical men so as to avoid pitfalls and opportunities for stigma of carelessness and negligence. Let me say right here, I feel keenly on this point; given a case, which has suffered from violence, with or without an apparent bone fracture; the medical man who will not and does not better his knowledge of the exact condition surely borders dangerously near criminal negligence; a consultation is always advisable and an X-ray picture is a powerful consultation for knowledge and best treatment.

X-RAY DEMONSTRATION FOLLOWED.

(Many interesting plates were thrown upon the screen and very lucidly described, among which were:—A-9, fracture of one bone of leg, caused by a bale having been rolled against opposite side. A-11, fracture of the bone in one toe and the dislocation of a joint. A-13, a fracture of a finger in which there was considerable difficulty in reducing. A-20, fracture of the posterior process of the astragalus. A-26, a difficult fracture of the "big" toe; not easy to detect. A-34, fracture of the epiphysis of the os calcis from a kick on the heel. A-40 and 43, a Colles with no excuse for non-discovery, showing beautifully the deformity and correction. A-155, the tearing away of the epiphysis of the radius, the result of a fall from a bicycle. B-108, an unrecognized dislocation of the shoulder.

While several other pictures were shown, many were of such a nature as to be somewhat elusive of description in type. The exposition was interestingly followed.—Ed.)

ETHER AND LAVENDER

AND THE STORY GOES.

That the Smart Man of the community had "been called to his fathers." And reaching the Pearly Gates was greeted by St. Peter, who inquired if he was the Smart Man well known to fame.

"I am," replied the unabashed applicant.

St. Peter eyed him; "Go and look over a few million of the male shades yonder, and tell Adam that I want him."

And the Smart Man went; only to return in ten minutes with Adam. This rapid work was a surprise, but he was due for another trial.

"Go," said St. Peter, "and look over several million female shades that you will find in the next county, and send Eve, also."

And the Smart Man went. He was back in a few minutes with Eve. The Keeper of the Keys was astounded.

"How did you do it?" he gasped.

"The easiest thing I ever had to do," flippantly replied the Smart Man. "They were the only two in the whole bunch that hadn't an umbilicus."

MISSING WORD CONTEST.

Fill in Missing Words and Explain Process of Collection.

"I cannot come to treat your wife, Mr. Slowlie, you have showed no disposition to pay your long standing account, and I know that you can afford to pay; I am unwilling to extend further credit."

"I'll pay you, Doc., kill or cure, I'll pay you. My wife is awful sick, and I wish ye'd come."

The doctor went. The case was typhoid and the patient died. The bill for treatment was sent; repeatedly sent. Finally the man was called upon personally.

"Doc.," said the man, "I told you that I'd pay you, kill or cure, didn't I?"

"Yes, you did."

"You didn't cure her, did you?"

"No-o." "Well — — —?"

BASED UPON PRECEDENT.

An old man sat on the cottage doorstep, meditatively smoking a cob pipe. A neighbor passed. "How old are you now, uncle?" he asked.

"Wal," quavered the old man, "I'd be a hundred day afore yesterday."

"I congratulate you," said the other, "and hope that you may live another hundred."

"Wal, maybe, maybe," was the answer, as he considered the plausibility of the wish, "anyway, I be stronger now than when I started the first hundred."

"I hear 'Rastus, that that cross-eyed colored man that used to board with you is about to be operated upon to cure his trouble."

"Mebbe he is, an' mebbe he ain't," replied 'Rastus," but he don't eat in mah house again, till he is cured,—why dat man is so cross-eyed dat he don't know whether he is a catin' outer mah plate or his'n."

HEALTH NOTE.

It is bad luck to break one's leg on Friday.

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EDITORIALS

ALCOHOL.

Thro the daily press comes the information that Ralph W. Stone, Prohibition Director of the district of Chicago, has refused the supply of alcohol to the manufacturers of five of our patent "medicines" and threatened several others with the same fate.

It is very obvious that he intends to discourage the distribution and consumption of these products that have an over-supply of alcoholic content.

Whether or not he is in sympathy with the

law that invites this left-handed evasion, is beside the question; but it is most evident that, within his jurisdiction, he does not intend that his authority shall be flouted, or that "medicine" shall become a substitute for whiskey.

It is pretty generally recognized that all over the country the medical profession is grappling with the result of the "Volstead Act." Tabulated returns of fatal results of drinking concoctions containing methyl alcohol or other deleterious substances, however, are not at this time available.

Since the enactment of the prohibition law

the hospitals in this city and all others have not been void of patients suffering from drinking questionable liquors of whatever nature that has the capacity of a "kick." Even "Home brew" has taken its toll of those who indulge in its unfamiliar manufacture and we are often dealing with disordered digestion, "sour" stomach and kindred disturbances incidental to imperfect fermentation and crude or erroneous manipulation of seemingly harmless ingredients; all of which is bad enough and, in a way, may explain the patent medicine situation, but does not excuse it.

It is further our belief that the medical profession as a whole, does not frown upon the use (?) of alcoholic liquors taken in moderation, even as a beverage; certainly alcohol in some form is a most potent weapon in certain pathological conditions; and we might say, in passing, physicians should be entrusted to exercise their judgment as to what these conditions are and not be too stringently restricted in their prerogative in administration or by too much red-tape in regard to availability.

But to deal out alcohol of dubious quality or quantity in the guise of medicine to innocent tho misguided people who mistake the continued stimulation of constant "medication," to improved physical fitness, until the machinery of life wears out, or even to the initiated who take a bigger gulp, not so often but with a satisfied wink, is little short of a crime and is parallel to any other adulteration (only worst than most) and should be unqualifiedly condemned.

Whether we are in favor of the Volstead Act as a law is now of small consequence.

It is *law* and if we hold to our traditional institutions of law and order and to the organized authority of the country, it is our business to obey; attempted evasions are not only demoralizing and dangerous, but exemplifies the same reprehensible principles that make thugs and burglars.

If the law is repugnant, change it if it can be done, but the man that offends the law speedily finds himself a social as well as a legal outcast, with scant hope of mercy from the court, home respect moribund and even careless friends hard to find.

We congratulate Mr. Stone.

LIGHT IN DARK PLACES.

The development of bypaths divergent from the main course of medical progress and each emphasizing and attempting to develop some one idea has probably always been a factor in human life since the days of Hippocrates. These at present are represented by the various "irregular" cults and systems of healing. Many of them, of course, are frank quackery and as such have but little hold on the intelligent public; and these perhaps do not deserve careful study. Others, however, represent more or less honest attempts to study certain phases of medicine and while there is probably but little truth in the basic assumptions which distinguish them as separate "schools," they really train their practitioners to a limited degree and make a definite appeal to a rather large proportion of the public. With the underlying conceptions on which the various "pathies" are founded and more especially with the methods of treatment advocated the practitioner of medicine should be able to familiarize himself.

It is hard to overestimate the value of the careful investigation of quacks and nostrums that is constantly being carried on by the American Medical Association. Were it possible, in the same way, to obtain careful critical studies of the main cults of healing which are supported by a credulous public, the advantage to the profession and indeed to the public would be great. How often, for example, does the practitioner wish that, rather than condemning the work of the osteopath, in general terms because he can easily determine that it is grossly unscientific, he could base his opinion on an accurate knowledge of just what the osteopath believes, how he is trained and what methods he applies. Would it not be possible for a thoroughly unprejudiced and dispassionate investigation to be carried out, which would aim merely to establish facts and to place at the disposal of the general practitioner authoritative information regarding those whose activities often do so much to hinder his efforts in behalf of the public?

OF MEDICAL EXAMINERS.

This is one needed reform in the State of Rhode Island which has received little or no attention and which is of great importance. It concerns the duties and powers of Medical

Examiners and the law under which they operate.

The essential duty of a Medical Examiner is to obtain the cause of sudden death and of all deaths whether sudden or not, which may be due to accident, homicide, suicide, or occurring under suspicious circumstances. The diagnosis should be accurate and this can be arrived in only one way, namely by knowing the medical history of the injury and disease, which should always be confirmed by autopsy if necessary.

A man falls on the street and dies suddenly. The Medical Examiner is called and pronounces death due to "natural causes." This is no diagnosis. The man might have poisoned himself for all the examiner knows either with intent to kill, or by accident through food or drink. A private physician may call the Medical Examiner to the body of a person dead of some disease, a diagnosis of which the physician could not arrive at. The usual outcome is that the examiner signs the death return as due to natural causes or puts down a diagnosis of which he is not sure. Now it might so happen that the person died of bubonic plague. It is obviously just as important to recognize such a disease as to make a diagnosis in the case of homicide.

Under present conditions the Medical Examiner is not allowed to perform an autopsy without the approval of the Attorney General and this official will not grant it unless the examiner on the spur of the moment perhaps, after little opportunity to investigate the circumstances of the death can present strong evidence of foul play. This is surely wrong. Since the onus of making a diagnosis rests upon the Medical Examiner, he should be the one to decide whether an autopsy is needed or not. As a matter of fact an autopsy should always be done whenever there is the least cause of doubt as to the cause of any such death.

Apparently the State Government is afraid of the expense. This attitude is wrong. That the expense be not too great, the State Pathologist should be called upon to do all autopsies. He should be a physician who has had special training in pathology and medico-legal procedure. The ordinary Medical Examiner is not qualified to perform an autopsy as it should be done.

All evidence presented before a court relating to the cause of death in any criminal case should

be true and exact and the diagnosis submitted in writing. This is justice to the state and the defendant. A keen attorney for the defence might be able to show the diagnosis to be either wrong or doubtful.

It not uncommonly happens that bodies are disinterred to find evidence of foul play. This should never be necessary.

Many states of the Union have good laws establishing modern medico-legal systems, and why can't Rhode Island have them?

THE NEED OF LEGAL ADVICE FOR THE MEDICAL PROFESSION.

When the opticians decide that they desire the seal of the state's approval on their claims that their merchandising has attained to the dignity of a science, they employ a lawyer—or a covey of them—to eloquently and successfully press their claim before the Legislature. When the osteopaths feel that their claim to cure disease should be fostered by state control of their activities, able legal talent is called to their aid to establish their own State Board of Examiners, and when, in turn the chiropractors, observing the rich prizes to be had from a gullible public, seek recognition, their serried ranks and those of the osteopaths are led and manouvered by lawyers who know what their clients want and what they do not want—and they sooner or later attain their ends. But when the medical profession sees in proposed legislation, safeguards of the public health placed in jeopardy or their own interests threatened, nothing so clever, nothing so patently desirable is done. On the contrary, a few well-intentioned, but often inarticulate physicians, appear before a committee of the Legislature to voice their protests against the proposed legislation. What the medical profession should do—and specifically the Rhode Island Medical Society—is to engage and pay for the services of a bright, clever lawyer, trained not only in the legal intricacies of his profession which are always so baffling to the layman but also in touch with and interested in legislative happenings. He should be charged with the duties of closely scrutinizing all proposed legislation which may in any way affect the medical profession or the public health, to bring such matters promptly to the attention of

the officers of the Society, to explain intents, meanings and effects of the bills and to advise and actively direct the support or opposition of the medical profession in the matter. With such an arrangement, the opinions of the medical profession would be given the consideration they deserve at the hands of the legislators, and, being forewarned, it would not be necessary to call hurried committee meetings in the panic of approaching adverse legislation, but on the contrary the hearings would find the doctors ready with arguments presented in orderly sequence and with some cohesion of thought and purpose. What is more important than anything else, the aims of the medical profession would be more nearly attained by the employment of counsel than by clinging to the hap-hazard methods of the present.

IMPENDING MEDICAL LEGISLATION.

The local profession has recently been treated to some plain facts concerning the working of some of our laws which affect the medical man, notably the Workmen's Compensation Act, and some proposed amendments to this bill now before the General Assembly. If the entire profession can be aroused to the proper pitch, no legislation which is unfair to the working man, to the employer and to the physician, can ever be passed in this or in any other state.

We are living in an age of law making, an age when many a member of our legislature reckons his value by number of bills he can introduce at any one session. Laws are passed, Commissions created, and Boards established without regard to the increasing tax rate on an already sorely oppressed people. The time is past when we can sit content and watch the Assembly pass bills without protest or even interest on our part. We must be vigilant in keeping an eye on bills introduced which affect our profession, and we must stimulate our Committee on Legislation to keen watchfulness.

There are three bills of momentous interest to the medical public which are engaging the interest of the profession in other states, and which may be expected to appear in our legislative program at any time. They are Compulsory Health Insurance, The Maternity Bill and Old Age In-

surance. These bills all possess admirable and altruistic features and have been unthinkingly endorsed by many well meaning and intelligent people. The medical profession will oppose them,—not from motives of self-interest,—but because they will react unfavorably on the people as a whole, principally in the loss of self-respect, independence and personal privilege. Another reason for opposition is the enormous increase in taxation which will inevitably follow the passage of one or all of these bills. It is not necessary to discuss the features of the bills,—they are thoroughly covered in the medical journals which come to our desk every week. Let this be simply another incentive to oppose vicious legislation in whatever disguise it is introduced before our legislative bodies.

GEORGE DALLAS HERSEY, M. D.*

IN MEMORIAM.

By WILLIAM R. WHITE, M. D.,

If one giveth to another, of his possessions, of his knowledge, his toil or helpful advice, shall he not by the recipient, be held in grateful honor and remembrance? And shall not the one benefited render service in return according to circumstance and ability?

Verily, for such is the beneficent law of mutual responsiveness underlying human associations, of individual, family, society, civilized communities everywhere.

Thinking thus and believing that we, the Rhode Island Medical Society had too long left undone something that we ought to have done, I, at the December meeting of our Council, introduced a resolution providing that a committee be authorized to procure a tablet in memory of Dr. George D. Hersey, also a picture of him, both to be hung within this building.

I also assumed the privilege of naming the committee as follows: Dr. Jesse E. Mowry, our honored President, whose middle name might well be "Efficiency," who having aught to do proceeds to do it promptly and well; Dr. John M. Peters who I knew heartily approved of the measure involved and whose taste and judgment and conservatism were beyond question;

* Read before the quarterly meeting of the Rhode Island Medical Society, March 3, 1921.

Dr. Charles H. Leonard for many years neighbor and close friend of Dr. Hersey, also for several years his co-worker and the one of us best acquainted with his family; Dr. George S. Mathews, familiar with Dr. Hersey's work and the present custodian of the library building.

The resolution was unanimously adopted, as it was again by the House of Delegates.

How well that committee has done its work was made evident to all who saw, on entering the building to-day, the tablet and picture above and beside the entrance of the library proper.

The tablet is plain, durable, attractive to the eye. Its inscription is brief but explicit—telling of Dr. Hersey's 42 years Fellowship and 32 years of service as librarian, also these Latin words—"Si Monumentum Requiritur, Circumspice" copied from an epitaph in St. Paul's Cathedral, London.

A liberal translation would be, "If you would see his monument look around you." The picture is the best obtainable and recalls the man many of us knew.

Personally and in behalf of the Rhode Island Medical Society, I now accept those two silent, but expressive tributes to the sincere and efficient efforts of the committee and thank them earnestly for the same.

Now just why has all this been done?

The name of Dr. Hersey has been added to a long list of decedent Fellows of the Society, who in turn, and in various ways contributed to its honor, dignity and welfare, and whose memory is cherished to-day.

It was, therefore, on account of the different and signal service and benefit rendered by Dr. Hersey that the recent action was justified.

We may well regret that we are so late in doing it, and that it was not done during the doctor's lifetime, thereby adding to his happiness. I know that the matter had often been discussed with approval by his friends in the Society with full belief in the justice and merits of such recognition.

The only reason why no action was taken was that we were many, and each waited for another to act.

I had heard many expressions from different Fellows and wish now to say that the one who seemed to feel most deeply interested and desir-

ous of having something done was our lamented, great hearted Dr. Herbert Terry.

I felt very sure of cordial support when I decided to act and am now grateful for the privilege of telling some of my incentives for so doing.

In the 1920 February issue of the RHODE ISLAND MEDICAL JOURNAL there was published a carefully written and comprehensive memorial on the life and work of Dr. Hersey. Again in the 1920 June issue of the *Bulletin* of our State Board of Health there appeared an interesting article by the present librarian, on the development of the library, from which I quote as follows: "The first library committee was chosen in 1879 in June. Dr. Walter E. Anthony was made librarian, but soon resigned and Dr. Hersey was chosen for the office in 1880. From that time until illness prevented in 1911, he worked incessantly for the upbuilding of the library." From 1900 to 1912 the library was located in the Providence Public Library Building and during those years its growth under Dr. Hersey's enthusiastic efforts was steady and surprising. From 1879 to 1896, for instance, the average annual increase was 695 volumes—and on June 1, 1911, at the laying of the cornerstone of this building, President Frank L. Day remarked that it was Dr. Hersey's intelligent efficiency and increasing industry and loyalty that resulted in the building up of the library by increments of 500 to 1500 volumes annually, until to-day there are fully 25,000 volumes, a number second to that of any one state medical library.

The records show that, year by year, by far the greatest number of added volumes came by gifts, many of which were obtained by Dr. Hersey's personal solicitation and in a way that never gave offense to the living donor or to the survivors of deceased physicians or others.

Many who hear me now, knew Dr. Hersey and his work in our behalf, but many others, younger, know him only by name and it is now my pleasure to tell them something of his personality and methods.

Dr. Hersey was a man of decided literary tastes and accomplishments. He truly loved books, loved to collect them, to catalogue them and to glean choice passages from them for his own and other's enjoyment.

When he became librarian he surely made the upbuilding of the library one of his chief interests in life and gave to that work constantly of his time and strength and intelligence.

But though a book lover, he was by no means a man of one idea. As a citizen, physician, friend he was genial, kind and generous. He was a skillful, conservative surgeon. Once the writer, beginning a medical service at the Rhode Island Hospital found in one room two men who had been at death's door from perforating typhoid ulcers. Both had been operated on by Dr. Hersey and were on the way to recovery.

Still his interest and zeal in his library work were ever paramount.

During my seven years of service as secretary of the Society, it was my privilege to see much of him and to work with him more or less in the publication of the "*Transactions of the Society*." Often I would go to his office after eight in the evening and always found him surrounded by books, gifts from one or another source, all for the library. It was his delight to tell me about them and read to me selected choice paragraphs. It was a familiar sight frequently, to see him in his buggy on his way to the library with volumes or pamphlets piled on the seat beside him.

He received a great many books and naturally many duplicates, some of which he exchanged with librarians in other states.

When his professional friends were starting on vacation journeys, his last word would be a request that they call on doctors, especially venerable ones, and learn of some rare and interesting book for his library.

Thus he worked for us up to January, 1913, when he was disabled by illness and removed to the Rhode Island Hospital. His mind was not affected and though confined in bed, his books were all about him and his talk chiefly of them.

Later he removed to South Carolina where he died in September, 1919.

During those last years he kept up his interest in our Society and worked diligently to the last, collecting data for a Historical Catalogue of the Fellows and Honorary Members of the Society from its founding in 1812.

In this work he corresponded regularly with Dr. Charles H. Leonard, sending him lists of names of past physicians, asking that they be

sought for in college catalogues and other possible lists and records. The two friends thus collaborating did a vast amount of work, the results of which were nearly ready for publication when Dr. Hersey died.

It will be a matter for regret if that valuable biographical material be not preserved in some accessible form because of its intrinsic interest, and likewise as a further tribute to those two sincere workers in our behalf.

Dr. Hersey was Secretary of the Society six years, its President two years and editor of its "*Transactions*" for thirty years. Did he not give much unto us, and shall we not hold him in grateful remembrance?

My fellow members, we all have reason to feel both pride and satisfaction in our ownership and occupancy of this building so admirably suited to our comfort and convenience, and I ask you to recall for a moment how we came to have it.

As our library increased, so the Public Library increased until we had a friendly, but emphatic notice to remove. Then came the imperative need of a permanent, convenient fire-proof home for our large and valuable library which proved to be the incentive to augment our modest building fund, purchase land and build. We did so and here we are. If our library had not inspired us, who shall say we would not still be holding our meetings in whatever halls we could hire for a day's use?

Had we not secured our building prior to 1914, we surely would not have it to-day.

So again if you require a monument to Dr. Hersey, look around you! True he gave not as from the wealth of a Carnegie, but he gave of his life and strength and knowledge.

We, few in number, his contemporaries, can well remember him, but it is right and becoming that yonder tablet serve to inform and remind you of middle age and, especially you younger members and also the succeeding generations for a century or more.

We have here a library of 26,000 volumes, a large collection of current periodicals of the highest excellence all under the care of Miss Grace E. Dickerman, whose willingness to oblige and assist is only equalled by her efficiency and comprehensive knowledge of all that pertains to her position as librarian. If one here has not bene-

fited by her aid in medico-literary work or reference research the loss is his own.

If again the resources and facilities of our building are not made helpful to our membership to the extent they ought to be, the more is the pity. The opportunity is yours. Look back with me to May, 1909, when the committee on the library reported that during the last year there were 1,296 visitors to the library, all users of books.

Beyond a doubt the placing of this memorial tablet in honor and grateful remembrance of Dr. George Dallas Hersey and his service in our behalf, will be pleasing both to his friends in our profession and also to very many of his former friends and patients as they get to know of it, and perhaps to see it.

Let us hope the surviving members of his family may see it and appreciate our action.

Could we do more than we have done? Yes, we could make "The Hersey Library of the Rhode Island Medical Society" its official name, and so designate it by a modest name-plate upon the stock room door.

How many libraries in this country bear the name of one who did most to upbuild them, working for them as Dr. Hersey did and as Dr. James Chadwick did for that wonderful medical library in Boston?

In closing, I ask you all to feel that we have simply done the right, just and becoming thing, in thus placing a silent, but still a speaking witness to our appreciation and gratitude, doing it in memory of one who did so much during so many years for our Society.

Of Him it may be said:

"Mankind his life a lesson taught
By diligence with which he wrought
For us this heartfelt prayer is best,
"God give our benefactor rest."

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was called to order by President F. T. Fulton at 8:55 p. m. on February 7, 1921, in the Rhode Island Medical Library.

The records of the previous meeting were read and approved.

There were no communications.

Dr. Henry C. Hall read a memorial to Dr. William John McCaw, which was accepted by a rising vote, and it was moved and approved that a copy be sent to Mrs. McCaw and one copy placed on file in the archives of the Association.

The President announced the appointment of the following committees:

Collation: Dr. Nat. H. Gifford, Dr. William P. Buffum.

Publicity: Dr. M. B. Milan, Dr. W. O. Rice, Dr. F. V. Hussey.

There being no further business Dr. Robert B. Greenough of Boston gave an address on "The Modern Use of Radium," which was a careful, straight-forward statement of the different effects of radium on living tissue, the manner of using it, and the present view of its value in the treatment of cancer and other neoplastic conditions in the human body.

In the discussion Dr. Isaac Gerber agreed with Dr. Greenough's views and approved of its use in some conditions not dwelt upon by Dr. Greenough. Dr. Carl D. Sawyer discussed its use in skin conditions. Dr. James Hamilton sounded a note of warning against undue optimism in its use. The discussion was closed by Dr. Greenough.

The meeting adjourned at 10:40 p. m.

Attendance: One hundred and five members and two guests.

Collation was served.

Respectfully submitted,

PETER PINEO CHASE, *Secretary*.

WASHINGTON COUNTY MEDICAL SOCIETY.

The Annual Meeting of the Washington County Medical Society was held at the Colonial Club, Westerly, Thursday morning, January 13, 1921.

Records of last meeting were read and approved.

A note of appreciation was received from Mrs. Mary P. Gardiner, widow of Dr. Henry K. Gardiner, for the Resolutions adopted by this Society at its last meeting.

Dr. Champlin of the Hospital Committee reported progress and spoke of the recent action of the Westerly Board of Trade in appointing a committee of fifteen to consider this matter.

In view of the fact that two of our members who were in the service have received practically nothing under the agreement of April 12, 1917, it was voted to send another letter to each member stating conditions and asking for an explanation from those who had not settled.

A letter from Arthur MacDonald, of Washington, D. C., asking our support to his application for Directorship of the Census Bureau, was received and by vote laid on the table.

The Treasurer reported the finances in a healthy condition with all bills paid and all dues collected but six dollars.

Officers for the ensuing year were elected as follows:

President: P. J. Manning, Wickford.

1st Vice President: A. S. Briggs, Ashaway.

2nd Vice President: J. E. Ruisi, Westerly.

Secretary: W. A. Hillard, Westerly.

Treasurer: W. A. Hillard, Westerly.

Auditor: S. C. Webster, Westerly.

Censor for three years: R. R. Robinson, Wakefield.

One new application for membership was received and referred to the Board of Censors for investigation.

Dr. P. E. Truesdale, of Fall River, Mass., addressed the meeting on "Diseases of the Gall Bladder," which elicited much discussion.

Adjourned and dined.

At a meeting of the Washington County Medical Society held April 12, 1917, the following Resolution was adopted:

"Resolved, That should any member of the Washington County Medical Society be obliged to leave his practice for any war service, that the members remaining at home shall carry on his practice, and return to his family fifty per cent. of the cash proceeds of the same, and on his return, shall not attend any of his patients for a period of six months without his consent."

It has been made known to the Society that this vote has not been complied with by some of the members. The matter was talked over in detail at the Annual Meeting held January 13, 1921, and it was voted that this Resolution of April 12, 1917, be again drawn to the attention of each member.

A physician in your locality WAS in the service.

Did you do any work that he would probably have done had he not been in the Government Service? If you did, and have not given him half, you owe it to him and you should arrange that he is reimbursed, or, in justice to yourself and the Society, let us know why not.

Respectfully,

W. A. HILLARD, M. D., *Secretary*.

WOONSOCKET DISTRICT MEDICAL SOCIETY.

The Woonsocket District Medical Society met at the St. James Hotel (small dining room), Thursday, February 17, 1921, at 4:30 p. m.

Dr. Jacob S. Kelley addressed the Society on "Some Important Fractures Frequently Overlooked."

THOMAS F. BAXTER, *Secretary*.

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otological Society was held at the Rhode Island Medical Library on February 10, 1921, at 9 o'clock.

The papers of the evening were, "Recent Articles on Refraction," by Dr. George W. Van Benschoten and "The X-Ray in the Diagnosis of Acute Mastoiditis," by Dr. F. Nolton Bigelow. An exhibit of X-Ray plates, by Dr. Isaac Gerber, supplemented Dr. Bigelow's paper. The papers and the exhibit of X-Ray plates were thoroughly enjoyed and discussed by all present.

Meeting adjourned at 11:30 o'clock.

J. L. DOWLING, M. D., *Secretary*.

HOSPITALS

RHODE ISLAND HOSPITAL SURGICAL STAFF.

The regular monthly meeting of the Surgical Staff was held at the University Club, Wednesday, March 2, 1921, and was preceded by an enjoyable dinner at which Dr. Cutts and Dr. Hollingworth of the Consulting Staff were guests.

The regular monthly meeting of the Gynecological Staff was held at the hospital March 2, at which time work of the previous month was discussed.

Dr. Bahnson Weathers has resigned from the Interne Staff to assume the responsibility of the practice of his brother, who is taking a post graduate course in Europe.

Dr. Edward G. Melvin of Providence has been appointed to fill the vacancy made by the resignation of Dr. Weathers.

Dr. Deering G. Smith has completed his internship at the Rhode Island Hospital and will start an internship at the Providence City Hospital April 1.

Dr. Norman C. Bender will complete his service as interne at the Rhode Island Hospital April 1, and intends to do some special work with Dr. Schloss at the New York Nursery & Child's Hospital.

Dr. George V. Coleman will complete his internship at the hospital April 1, and will take a service at the Providence Lying-in Hospital.

Dr. Henry S. Joyce of Ipswich, Mass. and Dr. Gilbert A. Gaylor of Cambridge, Mass. will start regular two-year internships at the Rhode Island Hospital, April 1.

Parthenia Foster, a graduate of Cincinnati University and Cincinnati Hospital, has been appointed second Assistant Superintendent of Nurses at the Rhode Island Hospital.

Respectfully,

NORMAN C. BAKER, M. D., *Sec. Staff Ass'n.*

PROVIDENCE CITY HOSPITAL.

The visiting physicians met at the City Hospital on January 18, 1921, and formerly established a staff organization. This was in response to a request of the Board of Hospital Commissioners. The hospital has had a consulting staff from its inception, but with the development of the out-patient service, the visiting staff has been growing until there now is 33 members.

It is perhaps well to explain that none but contagious patients can be admitted to the hospital, but all kinds of disease can be treated in the out-patient department. Last year 25,000 visits were made to this department.

The meeting of the staff was called by the Superintendent at the request of the Board of

Hospital Commissioners. After the adoption of the by-laws and a discussion of the aims of the association, the following officers were elected:

President—Nat H. Gifford, M. D.

Vice-President—Pearl Williams, M. D.

Secretary—Harmon P. B. Jordan, M. D.

The executive committee consists of the heads of the various departments, the officers of the Association and the Superintendent.

The following men belong to the Visiting Staff:

Jay Perkins, M. D., Pearl Williams, M. D., Alex M. Burgess, M. D., Michael J. Nestor, M. D., Prescott T. Hill, M. D., Henry J. Gallagher, M. D., Carl D. Sawyer, M. D., Nat H. Gifford, M. D., Raymond G. Bugbee, M. D., Frederic J. Farnell, M. D., Hilary J. Connor, M. D., Bertram H. Buxton, M. D., James A. McCann, M. D., John G. Walsh, M. D., James W. Leech, M. D., Henry E. Utter, M. D., William P. Bufum, M. D., George T. Spicer, M. D., Harold G. Calder, M. D., John T. Monahan, M. D., Edward A. McLaughlin, M. D., Elihu S. Wing, M. D., Paul C. Cook, M. D., F. Nolton Bigelow, M. D., John J. Gilbert, M. D., William C. McLaughlin, M. D., Frank M. Adams, M. D., William C. Muncy, M. D., Walter C. Robertson, D. M. D., Ira Noyes, M. D., Anthony Corvese, M. D., Eric P. Stone, M. D., Professor Frederic P. Gorham.

Dr. Robert M. Lord finished his service on January 1, 1921 and began immediate service at the Children's Hospital in Boston, Mass. Dr. John H. Brothers finished a seven months' appointment January 1, 1921 and began a service at the Rhode Island Hospital. Dr. Adelman finished a six months' service on March 1, 1921 and has gone to the Children's Hospital, Boston, Mass.

ST. JOSEPH'S HOSPITAL.

Regular Conference of the Staff, Friday, March 11, at 9 p. m. Out Patient Building, Plenty Street.

GEORGE F. JOHNSON, *Secretary.*

NOTICE

Through the courtesy of a reliable authority we learn of a resolution passed by the Town Council of New Shoreham, asking assistance in securing a resident physician for that town. If our information is correct, there were three physicians there previous to the war, and report says that all did well. With a resident population of twelve hundred, very largely augmented during the summer months, one or two drug stores and practically no competition, it would seem well worth the while of some physician who is not already firmly established, to give this opportunity his consideration.

HEALTH NUGGETS

Little coughs often lead to large coffins.

The race is not to the swift but to the healthy. Keep fit.

"Are we like sheep!" The U. S. Public Health Service has just bought 2,500 sheepskin coats for the tuberculous patients in its hospitals so that they may be able to sit out in the air and the sun this winter. It's the fresh air that counts.

The perambulating dental clinics of the U. S. Public Health Service have proved that poor health makes poor chewing; and that poor chewing makes undernourishment and poor health. Particularly it urges that the "six year molars" of children should be watched. These are not the last of the first teeth, but the first of the last; and once gone they can never be replaced.

This is the diphtheria season. Records of the U. S. Public Health Service show that 16 states reported over 5,000 cases in October and more in November. Don't worry about the "flu" this winter; it is unlikely to return. Worry about diphtheria; worry enough, anyway, to have your doctor determine by a simple test whether you and your children are immune. If they are not, protect them by the new method of immunization.

Investigations by the U. S. Public Health Service show that practically all bottle-fed babies thrive as well on powdered milk as they do on natural cow's milk; and that some who do not thrive on the cow's natural milk, do finely on the powdered. The national commission on milk standards urges health and food-control officials to encourage and not to hamper the dried milk industry.

"In so-called 'hot jobs' in industrial plants, where high temperatures are essential," says Surgeon General Cumming, of the U. S. Public Health Service, "the heat can be greatly diminished by water-jacketing boilers, insulating blast furnaces, with double walls of fire brick, and kindred devices. Where the actual temperatures in the plant cannot be much reduced great relief can be given by big electric fans. Radiant heat, which hurts the eyes, can be largely obviated by screens of wire mesh or of loosely hanging chains, through which the workmen can pass when they must approach the furnace. Goggles, wire-mesh face masks, asbestos aprons, cork or asbestos-soled shoes all help considerably. Easily accessible drinking water, never colder than 55 F., is absolutely essential to health."

Within the last year the danger to railway travelers of infection from typhoid fever, dysentery, and other water-borne diseases has been reduced to a minimum in most parts of the country through the co-operation of the U. S. Public Health Service with the different state boards of health. Nearly all supplies used on trains for drinking or cooking have been tested by service engineers and found to be safe, and will be re-inspected periodically.

In the last six weeks nine hospitals for soldier patients have been opened by the U. S. Public Health Service. Of these, four are fine buildings that have been leased from their owners. The others are army hospitals, built hurriedly during the war, that have been taken over and put into as good condition as possible. The demands on the service for accommodation are too great to permit even these flimsy wooden war structures to be refused.

The flea, louse, mosquito, and fly have all been convicted of transmitting disease; and the bed bug has been accused. The U. S. Public Health Service, however, finds that he is probably innocent. If he ever does transmit disease, he does so by carrying the germs on his mouth and not in his blood; and he can do this effectively only under especially filthy conditions, which would call for drastic methods to exterminate all vermin.

All industrial plants are more or less dusty. But how dusty is the air in any particular plant? The degree of its dustiness is important, for certain forms of air dustiness create in the workers a predisposition to tuberculosis and other diseases. Dr. O. M. Spencer, of the U. S. Public Health Service, shows in a recent report that neither exhaust pipes nor wet processes in grinding and polishing prove that the dustiness in an industrial plant is satisfactorily controlled. Many exhaust pipes do not exhaust, and wet processes may create far more dust than dry ones. Only actual dust counts made at the working level show the actual dustiness; and these should be made periodically.

Has the removal or cure of remediable defects in school children had the great beneficial effects that were expected? Nobody knows, for both time and follow-up methods have been lacking. Now, however, the U. S. Public Health Service is making arrangements to have such children in all parts of the country followed up for some years to learn how greatly they actually have profited by the help given them. It will welcome additional information along these lines from all sources.

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ORIGINAL ARTICLES

THE VALUE OF RADIUM IN THE TREATMENT OF DISEASE.*

By ROBERT B. GREENOUGH, M. D.,
Boston, Mass.

It is about ten years since radium has been available in this country in large enough amounts for the treatment of disease, but in spite of the large amount of pioneer work which has been done there still remains a great deal of uncertainty on the part of surgeons and physicians throughout the country in regard to its value in the treatment of disease. Few will deny that radium has been a great addition to our resources, but the precise details of its applicability to surgery and the particular diseases in which its value is most manifest are not yet settled entirely beyond dispute.

When radium was first introduced here, its extraordinary physical characteristics and its undue exploitation in the public press led to expectations of its value which were undoubtedly unjustified by the actual facts. People came to think of radium as a magic element, and to expect from its use effects far greater than common sense would ever justify. While further experience in the actual use of radium in the treatment of disease has yielded disappointments, in that many of these supernatural effects have been found not to exist, a clearer and more accurate knowledge of its advantages has also been obtained, and we can well say at the present time that radium has been one of the greatest additions to surgical resources which have been made available in many years.

The amount of radium in the world is very definitely limited. A competent chemist estimated last summer that before the war there were about 150 grammes of radium in existence.

During the war about 50 grammes were destroyed, or scattered so widely that its recovery is an impossibility. The amount of radium-bearing ore is also limited, and it is probable that not much more than 100 grammes of radium can be extracted from the deposits of radium-bearing ore now known to exist. If all of the radium now collected in Baltimore, New York, and Boston were employed continuously, day and night, in the treatment of cases of cancer of the uterus alone, at the dosage now in use at the Huntington Hospital, the amount would be sufficient only for a single treatment of each of the 9000 cases of cancer of the cervix which die every year in the United States, and none would be left for the treatment of the many other forms of cancer and of other diseases in which radium is useful. It is easy to see, therefore, that the amount of radium is wholly inadequate for the uses to which it could be applied.

There are a number of different forms in which radium can be applied, but for ordinary surgical work the usual methods make use of the radium salt itself, or of the emanation which is given off as a gas from the radium and rapidly disintegrates with the production of the same effective radiation as the salt itself. The radium salts are used either in tubes or spread on flat varnished applicators. In these forms, radium can be employed conveniently for the treatment of superficial lesions of the skin, (with flat applicators) or for introduction in tubes into cavities, such as the cervix of the uterus. The use of emanation permits a greater elasticity in the formation of applicators of any desired strength or shape, even to the preparation of tubes of minute size and strength for insertion directly into the tumor mass, and obviates the danger of accidental loss of the radium itself. It has the disadvantage that complicated apparatus is needed for collection and purification of the emanation, and on account of its

* Read before a meeting of the Providence Medical Association at Providence, R. I., February 7, 1921.

rapid disintegration a continual renewal of the supply of emanation tubes is necessary. With the same dosage, however, the same results may be expected whichever method is employed.

As a result of the exposure of living tissues to the radiations of radium, certain definite manifestations can be brought about. Although with our gross methods of observation no immediate change takes place as a result of radiation, by physical methods a difference in the electrical conductivity of the exposed tissues results which can be measured with suitable apparatus. To all gross appearances, however, the tissues are unaffected by exposure to radiation for a considerable period of time. The comparison readily occurs with the exposure of the photographic plates which in appearance cannot be distinguished from the unexposed plate until a developer is added, which brings the picture into view. We do not know the nature of the developer that is acting on the tissues during the latent period after a radium exposure, but at the end of a certain lapse of time definite changes in the tissues take place, depending upon the dosage employed. With a large dose of radiation a destructive effect is brought about which ends in the death of the tissues exposed. This is the destructive or caustic effect of radiation, and one which is frequently employed in the treatment of disease.

If we take a considerably smaller dose of radium and expose living tissue to it we find that the growth of the tissue is inhibited for a longer or shorter period. In some experiments conducted by Bovie, with ultra-violet light, single-celled organisms could be held up in their growth for a period from two to ten days before they began again to multiply. It was observed however, that after this period of inhibition a period of acceleration of growth took place such after a further lapse of time the progeny of the radiated cells outnumbered those of the un-radiated control. Here we see examples of two definite phenomena—inhibition and stimulation of growth.

A fourth result of exposure to radiation can be demonstrated in the laboratory. This may be called a modification of growth, and is demonstrated with embryonic tissues. As a result of small doses of radiation upon an embryo the regular homogeneous growth of the tissues is

interrupted and abnormalities of growth, extending even to the production of monsters, may be brought about. In the terms of these four phenomena observed in the laboratory—destruction, inhibition, stimulation and modification of growth—we must interpret the clinical results of the use of radium in the treatment of disease.

Certain tissues appear to be more susceptible to the effects of radiation than others. This phenomenon was first observed and described by French experimenters using the x-ray, and is known as the law of Bergonié and Tribondeau. They found that immature cells, in an active state of division are more sensitive to radiation than cells that have already acquired their adult morphological or physiological characters. In radio-therapy this phenomenon is spoken of as 'selective' action, and because of the characteristics of cancer growth by which an increase in the reproductive functions of the cells is manifest, it has been held that cancer tissue also should show this increased sensitiveness to the effects of radiation. While it is true that certain forms of malignant growth appear to be more sensitive to radiation than the surrounding tissues, it must be admitted that the practical value of this "selective" action in the treatment of cancer has proved a disappointment, and indeed, some forms of cancer tissue show, if anything, a greater resistance to the effects of radiation than the surrounding tissues. It is for this reason that the tendency has developed in all of the clinics where radium is used to employ more and more the destructive action of radium in the treatment of malignant disease.

A sharp distinction should be made between the treatment of cancer and the treatment of non-malignant conditions when radium is employed. A benign tumor, like a fibroid of the uterus, does not need to be entirely destroyed in order that the patient may be relieved. The cells of a leio-myoma of the uterus differ but little, if at all, from those of the normal uterus; they remain at their place of origin and not spread to more distant parts. If we expose the tissues of a fibroid to radium a shrinkage of the tumor may be observed and the symptoms it produces may be entirely relieved without massive destruction of the tumor tissue. This

effect may be compared with the modification of growth observed in the laboratory in the developing tad-pole, and it is a phenomenon which is observed in a number of different benign lesions and in some of the less malignant forms of cancer. When we are dealing with a tumor like cancer of the breast or cancer of the uterus, however, the cancer cells are no longer in their normal situation, and no matter whether their growth is temporarily inhibited or modified, so long as a single living cell remains which is capable of further growth the disease is not cured. In using radium for the treatment of cancer of the cervix this destructive action of radium is carried to its greatest possible development. The tissues of the uterus are well adapted to the employment of a destructive dose of radiation without damage to the surrounding tissues. The method of treatment now in use at the Huntington Hospital, which has been developed by Dr. G. A. Leland, Jr., involves practically an operative procedure and an anaesthetic. The uterine canal is dilated and tissue is removed for pathological examination. The uterine cavity is packed with tubes of radium which remain in for twenty-four hours, and the diseased tissues of the cervix are pierced with small tubes of emanation, inserted with a trocar, and allowed to remain indefinitely, until they come away with the tissues destroyed. A dosage of from 6,000 to 8,000 millicurie hours is thus obtained. By this method many cases of inoperable cancer of the uterus can be made free of local disease, and relieved of all their most distressing symptoms. If the disease is already beyond the reach of the local application in the tissues of the pelvis, or in the regional lymph nodes, treatment even of this degree of severity is not likely to be curative, because of the impossibility of applying to the regional lymph nodes or to the deeper tissues, a destructive dose of radium.

Other forms of malignant disease than cancer of the uterus are also susceptible to treatment by destructive radiation. Carcinoma of the external skin, whether of the epidermoid or basal-cell type of growth, while still in its early superficial stages is readily amenable to destruction by a sufficient dose of radiation. Since lesions of this sort are slow to metastasize to the regional lymph nodes, they form, perhaps, the largest

group of cases suited to curative treatment by radium applications. In the more advanced cases, however, where the disease involves the deeper tissues, and especially bone, a cure by radium treatment is rarely to be expected.

Cancer of the mouth and tongue and nasal sinuses forms another group of cases in which the destructive effects of radium treatment can be employed to great advantage. There are many cases of cancer of the mouth and tongue in which radical operative treatment, on account of the severity of the operation, is contraindicated in the individual case. In such cases a local excision and cauterization, followed by the implantation of emanation tubes, will sometimes bring about the local destruction of the disease. In such cases, however, the metastases to the regional lymph nodes must be provided for, either by radical dissection, if the possibility of a cure is to be entertained, or by deep radiation of x-rays or radium as a palliative measure.

The phenomena of inhibition of growth and of stimulation are applicable especially to the palliative rather than to the radical treatment of cancer. As a result of the exposure of tumor tissue to deep radiation both of these effects may be observed. There is a retardation in the development of the disease which can be observed in a great many cases, clinically, and which is, I think, beyond dispute. With that there goes a very definite increase in the formation of fibrous tissue in the radiated area. As a result of this increase of fibrous tissue which has long been recognized as a phenomenon following prolonged radiation, a degree of encapsulation of the tumor tissue takes place which assists in the retardation of the spread of the disease, and, in some cases, appears to be sufficient to hold the process for long periods of time without obvious advance. As a rule, radium is not so effective in this respect as is the x-ray, partly perhaps, because of the fact that wide areas have to be covered, and a sufficient amount of radium for this purpose is not readily available. Although our modern x-ray apparatus does not produce rays of such short wave length, and thus such penetrating rays, as the gamma rays of radium, there is reason to believe that improvements in the x-ray which have been developed in the past two years will soon make possible the production of x-rays with a pene-

trating power approaching closely to that of radium. Such apparatus has been employed in the treatment of patients in Germany, and a new apparatus devised by Professor William Duane in operation for experimental purposes in the laboratory at Harvard.

We may say that radium has proved itself to be a most valuable addition to our resources in the treatment of disease.

It has not displaced surgery as the best method of treatment for cancer, although superficial, non-metastasizing cancer can often be treated better with radium than by operation.

As an adjunct to surgery in extending the possibilities of local excision of the disease, it has made possible the cure of cases hitherto considered beyond the possibility of operative treatment.

The greatest value of radium, however, in the treatment of cancer appears to be its employment in palliative treatment.

Under its use the progress of the disease may be retarded, the local, superficial manifestations of the disease may be destroyed, and the patient's most distressing symptoms may be relieved.

Many benign tumors and non-malignant diseases can also be affected favorably by radium. In some of these conditions, as in fibroid of the uterus, a clinical cure of the disease can be accomplished. In other diseases, like leukaemia and lymphoma, marked temporary improvement may be obtained, and the patient's comfort and usefulness restored for a long period of time, even though a cure of the disease is not accomplished.

DISCUSSIONS.

DR. ISAAC GERBER: It has been a great pleasure to listen to as lucid and comprehensive a discussion of this subject as we have just heard. I was especially pleased at the very conservative tone of a man who has had as long and successful an experience with radium as Dr. Greenough.

My own experience with radium has been limited to the use of the element and not the emanation. My own experience in the past two years has instilled in me a very, though not altogether pessimistic attitude towards cancer, but I feel that eventually the use of radium is not going to be in the field of cancer but in the

treatment of various benign lesions. I was glad to hear Dr. Greenough group the radium and x-ray together because the whole subject is one of best using these minute wave lengths for their therapeutic effects. He dwelt very briefly on the new work that is being done, of which there was a short review in the *American Medical Association Journal*. The Germans especially have been, the past two years, doing very little other research work except along the lines of therapeutics and it is quite true that at present, (and we hope in the future with more certainty,) means are being devised by which we can very closely approximate radium by means of the short-wave x-ray. It is going to be a good long time before it proves as practical as the radium method. It is a very tedious, long drawn-out and tiresome procedure. One patient was treated for ten hours in the Trendelenburg position with x-rays. Some of these cases require the utmost degree of medical care but eventually that method will perhaps replace the radium in its use with cancer. At the same time if we use radium with an intelligent appreciation of the fact of its real curative possibilities we are able to accomplish considerable.

I have found the combination of x-ray and radium of far more effect than the use of radium alone. Very likely it is due to the fact that the barrier of fibrosis seems to be more easily produced by stimulation of x-ray than the available amount of radium which we can use.

Leaving the subject of cancer, I want to mention a few of the benign conditions in which radium or radiation altogether is of distinct value. The subject of angiomas was not mentioned at all. That covers a very wide pathological field. X-rays were tried in this field a good many years ago. Radium seems to offer a much better chance of clearing these conditions although it has to be used very occasionally and carried over a long period of time. With care and time the great majority of angioma cases can be finally effected favorably with radium.

In regard to conditions of lymphadenoid hypertrophy, for example, there has been a lot of talk in the journals lately about the radiation of certain types of hypertrophied tonsils. The same effect can be arrived at with the use of radium with far more comfort, less excite-

ment of the patient, and without having to remove them. We probably know that in cases that have been treated and followed with controls that were removed at various times, show a shrinkage and a closing of the lymphadenoid tissues. Rockefeller Institute obtained clean cultures in cases that were followed at the Institute. We will be able eventually to obtain clean cultures where staphylococcus viridin existed originally in pure culture. Even though the complete tonsil may not be involved, an infecting focus can be irrationate to a large extent in many cases. An allied condition is the hypertrophy of the thymus. The x-ray has been used for a good many years in the treatment of persistent thymus in infants. There has always been a good many difficulties in the use of x-ray in children.

In the past couple of years radium has been used instead of x-ray and as far as I am able to tell the use of radium is much more thorough than that of x-ray. One treatment, which covers the forearm and elbow, will produce an almost complete relief from pressure symptoms. Keloids, painful scars, and certain types of chronic infected wounds have been treated with radium as well as with x-ray. Hypertrophy of the prostate seems to be synonymous with operation. There are plenty of cases where the patients are already in a feeble condition, arteriosclerotic weakness and infections, and it is certain that cautious treatment of the hypertrophied prostate can lead to a shrinkage which will at least diminish the obstruction, relieve the suprapubic distress and discomfort and make the patient much more comfortable. Eventually surgery will be thought unfair, and it may be possible to produce enough shrinkage of the prostate so that surgery will not be at all necessary.

The hemorrhagic conditions at or around the menopause at which frequently the uterus is removed and the patient suffers the sequellae which occur as a result. Many of the cases of uncomplicated fibroids, where there is no reason to believe that there are complications such as inflammations, etc., very frequently a single dose of radium supplemented by one or two x-ray treatments will bring about complete cessation of the hemorrhage. As for the non-malignant hemorrhages associated with tumor forma-

tion or other complications, I believe that a great majority of Gynecologists to-day are ready to place that type in the category of non-surgical conditions altogether. Radium with x-ray as a supplement will produce a complete cessation of all clinical symptoms.

DR. CARL D. SAWYER: I think this has been a very interesting paper indeed. It has been very instructive, and we certainly must be impressed by the conservatism.

I am interested in the use of radium in the skin diseases. Dr. Gerber has spoken of the non-malignant cancers but not of the erythema. These certainly do seem to do very well under the use of radium. I think the opinion of the men using it is, that it is an ideal method to treat such conditions. Some persistent symptoms of the nose and lip respond. After cauteries which originally will clean up under some mild antiseptic, radium seems to work particularly well in these cases. Some of those cases can be cured with carbon dioxide but you get quite a severe reaction. Radium causes less discomfort and is possibly more advantageous.

The course in treating colitis is to take them when the scars are commencing to hypertrophy. Get them early. They respond better than when you get a firm hard mass.

DR. JAMES HAMILTON: I am very glad to see the speaker of the evening. I think radium does both a great deal of good and harm. In the last year and a half I have seen the destructive process brought about by the use of radium. I think its therapeutic value depends on its destructive value.

I have in mind a very sad case. The patient was a woman about 50, who came to my office last fall with a slight necrosis over the breast. I immediately advised her (and even went to the trouble of sending a nurse to see her and urge her) to go into the hospital. She was afraid of the knife. She heard about the wonderful things done by radium. She did get in touch with a surgeon and he removed the breast and continued to treat her with radium until her finances were exhausted. I think this brings up a problem that meets home. She stopped treatment and went to work. On examination there was a scar over her breast. Her heart was enlarged; there was a dullness over

the mediastinum. In other words, the patient came to the office after radium treatment with metastasis of the lungs and mediastinum. There were adhesions about the scar and nodules in the axilla. She had an enlarged heart, myocarditis and endocarditis. I think the endocarditis is due to the radium. This is a case, I believe, that should have had an operation.

I have in mind another case of a young woman, 25 years of age, who had sarcoma of the forearm. I thought it looked nasty. In a short time it recurred. The speaker advised amputation of the arm, but the patient died of sarcoma, and disease of the lungs and mediastinum.

I think it should not be used in those cases where research has shown that it has no value except palliative value. The beginners in the use of radium are very prone to advise it in every condition. I think only an expert should use radium. I think that if all the radium scattered about the country could be put into an institution that the country would gain greatly. Every man advises it in Hodgkin's disease or leukemia.

I could cite several more cases and considerable destructive processes that have been brought about in the use of x-ray. I want to emphasize that we should be careful in the use of this powerful element. Every man who has not had a thorough and masterful training should not handle this potent element.

DR. ROBERT B. GREENOUGH: In regard to the possibility of heart changes following radiation, I have not encountered that, and I might say that I find it a little difficult to see why that should occur as a result of radiation. I should say the chances are far greater that a heart lesion existed than that the compensation developed.

My own experience with radium in the cancer of the breast is very limited. Owing to the large amount needed to accomplish results, we have restricted the use of radium to the local occurrences and we are using the x-ray for the more severe manifestations of the disease. A number of those cases have been very markedly benefited in a palliative way by x-ray. It has been the custom to do the complete operation, but to do it as a palliative measure.

"A NON-SURGICAL METHOD OF DRAINAGE OF THE BILIARY TRACT AS AN AID IN DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE."*

BY DR. B. B. VINCENT LYON, of Philadelphia.
Mr. President and Members of the Providence Medical Association:

I am sure I need not express to you my very great personal satisfaction in being invited to address your Association to-night nor to speak of my gratification in being able to accept. I am glad to be here and to present some of the newer phases in the attempts to solve certain aspects of the biliary tract problems.

I propose to-night to outline the inception and gradual development of a new method of examination into the diagnosis of biliary tract disease, to call attention to its application as a therapeutic measure in certain types of gall bladder and duct conditions, and, finally, if time permits, to sketch out our hopes of extending the scope of the method to attack certain of the "problem" diseases of internal medicine.

It is a long story and I have come a long way to tell it, and therefore I will ask your indulgence both as to its length and the manner of its presentation.

The study I wish to present to-night is an analysis of the diagnosis and treatment by means of a non-surgical plan of biliary drainage of the last one hundred consecutive gall bladder cases observed in private practice. These one hundred cases have been studied from 304 tabulated aspects, and, as anybody who has attempted this kind of an analytical study knows, this is a big and tiresome task. Yet I am very glad to have studied these cases in this way, if for no other reason than that it has taught me the errors of commission, but, more importantly, the errors of omission in diagnosis and treatment, the knowledge of which will be of great help in future cases.

I have not written any paper to read to you to-night, but will attempt to present extemporaneously the results of this study in very

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abbreviated form. I hope later to put on record in a more formal way some of the lessons I hope may be learned from this study.

I rather take it for granted that most of you are aware of the inception and development of a new method of more intimately approaching the diagnosis into diseases and disorders of the biliary tract, and that you are now familiar with the possibilities of treating successfully by this non-surgical method of biliary tract drainage many of the earlier and some of the later states of gall bladder and duct diseases. I cannot to-night go into a detailed description of this method, nor shall I speak at length on the rationale of its use. For this I must refer you to papers upon the subject which have been published during the past fourteen months. (Bibliography.)

Merely to refresh your memories let me recall to you that the fundamental basis of this method springs from the discovery of the late Professor Samuel Meltzer of the Rockefeller Institute of the fact that a solution of magnesium sulphate when introduced locally into the duodenum will relax the tonus of the duodenal wall and the sphincter (Oddi's muscle) of the common bile duct; and that almost simultaneously with this relaxation the gall bladder will expel its fluid contents partially or wholly into the duodenum. In previous papers I have pointed out the usual sequence of bile flow from the various components of the biliary system and the method adopted for the recovery of this fluid for chemical bacteriological and cytological examinations relative to developing a new detailed diagnosis and as a direct check on the progress and efficiency of treatment.

It is now my privilege to come before this meeting and declare more positively my belief that it is now possible by this non-surgical method to drain the gall bladder and biliary ducts of its fluid contents within certain limits to which I have called attention in previous papers. In the last of these papers thus far published I summed up the scope of this method as at present developed, first as a *means of diagnosis* of biliary diseases to supplement the usual clinical methods of diagnosis and the great help given us in many cases by the

roentgenologist; secondly, as an *alternative method of treatment* of many types of gall bladder and duct disease in which there arises a question of opinion as to whether surgery is or is not emphatically, and immediately indicated; and thirdly, as a *supplementary* method of postoperatively continuing the surgical principles of drainage in those cases incompletely cured by surgical means alone.

As a result of three and a half years of practical application of this method of diagnosis and treatment of biliary tract disease, in a series of over three hundred cases, I can most earnestly express my belief that it is now a proved and rational method in the successful treatment of early cases, and is possessed of great possibilities of future development in the prevention and control of many of the later and more severe states of disease of the biliary tract, and I trust it may hopefully be extended to certain diseases of the liver, of the pancreas and of some of the more serious of the problem diseases of internal medicine. Future papers will be devoted in part to a discussion of some of the results of an extension of this study into this larger field.

At this time I will not enter into a discussion of the principles and method of draining the gall bladder except to have you refer briefly to this chart of the biliary system which hangs before you. I believe that the sphincter of Oddi, here, normally is closed during the inter-digestive phase and that it opens in response to the stimulus of food chemistry. Then, according to the law of contrary enervation propounded by Dr. Meltzer, the gall bladder empties itself partially or wholly of its contents. The volume of bile expelled by the gall bladder most probably depends upon the state and composition of gastric food chemistry reaching the duodenum, if the experiments of Rost are correct. It is by studying the departures from the physiological sequence of events, as seem to follow the local application of magnesium sulphate to the duodenum, as well as by a study of the gross and microscopic appearance and bacteriology of the recovered bile, that we arrive at definite conclusions relative to the state of the biliary apparatus, both as regards its physiology and pathology.

The first angle from which these cases were studied was that of previous operation. It was found that 37 cases had been abdominally operated on prior to the present study. Of these 17 had undergone gall bladder surgery and 13 had had appendectomies independent of gall bladder surgery. After reviewing these postoperative cases of gall bladder surgery to determine residual infection it was found that positive bacteriology could be demonstrated in the biliary tract in 57 per cent. of the cases in which a cholecystotomy had been done and in 100 per cent. of the cases in which cholecystostomy had been practiced. In this small series, then, it would seem that cholecystectomy is the operation of choice, considering only for the moment the question of residual infection. In the cases of cholecystotomy infection was demonstrated in 100 per cent., and in the cases in which release of adhesions of the viscus was the only procedure 100 per cent. show still demonstrable infection. From the above it will be seen that surgery in the first place failed in a too large percentage of cases to free the biliary system of infection, and, in the second place, either failed to remove the primary focus causing multiple secondary foci, or failed to recognize the early stages of biliary infection and proceeded to remove the appendix alone.

The next point considered was the question of attempting to find the primary source of the infection which caused the gall bladder symptoms. I have felt for a long time that infection in the upper respiratory and digestive tracts is very frequently responsible for many of the acute or chronic conditions in the tract below. The four principal secondary foci are the gall bladder, the duodenum, the appendix and the sigmoid-colon. These may be involved singly, all together or in series, but surgical or medical treatment directed to any one of them will not preclude a recurrence or the later development of trouble at one of the other sites unless the primary source of the infection is eradicated. In the 17 cases previously operated on I was able to demonstrate, by cultural methods, infection still present in seven cases. In the rest of the series the tonsils alone were found infected in 16 cases.

I will not bother you with figures relative to the associated functional disturbances of the gastro-intestinal tract except to say that in the cases of proved or probable gall stones 57 per cent. had reduced gastric acidity as against 34 per cent. of cases not showing stones. When the gastric motility varied from normal it tended to hypermotility.

The question of the significance of biliary regurgitation into the stomach is one that has always interested me, and I have come to feel that frank biliary regurgitation is evidence of a disturbed physiology of the duodeno-biliary mechanism. In the first place, I believe the sphincter of Oddi should be closed except during the digestive cycle, and, in the second place, that reversed peristalsis should not occur normally in the duodenum, with certain exceptions not to be discussed here. In this study I found that of the cases with previous gall bladder surgery 71 per cent. showed fasting biliary regurgitation and 71 per cent. showed digesting biliary regurgitation as against 47 per cent. of fasting and 23 per cent. of digesting regurgitation in the non-operated cases. From this it would seem that operation on the gall bladder very definitely disturbed the physiology of this segment of the gastro-intestinal tract. In addition, it has been proved experimentally on animals and by clinical experimental study of these postoperative gall bladder cases that surgery in each instance has destroyed the contrary innervation of the gall bladder and Oddi's sphincter and has changed the normal physiological intermittent discharge of bile into the duodenum into a pathologically continuous one, with in many instances harmful results.

As to the associated general symptoms I would say that all these patients presented with gastro-intestinal or biliary tract symptoms. In addition to these localizing symptoms a very large number gave the history of symptoms suggesting focal infections or of auto-intoxication, the most prominent being easy fatigue, drowsiness, nausea, headache and dizziness. The physical findings referable to the upper right quadrant were meager as might be expected, but definite tenderness was demonstrated in 46 per cent., spasm in

6 per cent., and rigidity in 22 per cent. There was no instance of palpable gall bladder in this series. The average duration of ill health of this series of patients was nearly eight years.

Of this whole series positive bacteriology was demonstrated in 88 cases; the material obtained was sterile in 3 cases and no material was obtained in 9 cases. Of the 88 cases with positive bacteriology the streptococcic group was isolated in 50 per cent., staphylococci in 25 per cent., *B. coli* in 15 per cent., *B. subtilis* in 8 per cent., *B. pyocyaneus* in 1 per cent. and *B. typhosus* in 1 per cent.

To sum up the foregoing, the final diagnosis in these one hundred cases based on a careful analysis of the history, physical examination, various special examinations and the detailed information derived from a diagnostic non-surgical biliary drainage were divided as follows: gall bladder syndrome—27 per cent., gall stone syndrome—4 per cent., mixed syndrome (ulcer, appendix, gall bladder)—21 per cent., and vague atypical dyspepsia (with or without biliousness)—46 per cent. There was masked infection, proved by culture, in 88 per cent. of the cases. If, however, these cases had been studied only by the usual gastro-intestinal methods, supplemented by analysis of the history, physical examination and X-ray, but without the added information derived from biliary drainage, only 31.5 per cent. could have been diagnosed readily as gall bladder cases. The remaining 68.5 per cent. were impossible of such diagnosis except by means of direct cytology, bacteriology and chemistry of the bile obtained so easily by this method.

To turn next to the question of treatment, ninety of these cases were treated by me. In all cases but one the chief therapeutic measure consisted in lavage and disinfection of the stomach followed by drainage of the biliary apparatus. The duodenum was then disinfected as a measure of local protection, and a duodenal enema of Ringer's solution was given, reinforced where necessary with sodium sulphate, in order to secure a free fluid evacuation promptly and thus sweep out of the intestinal tract such infected bile as failed of recovery in our bottles. The duodenal enema

of 250 c.c. is kept at 103° F. and allowed to drip in slowly in not less than twenty minutes. This whole procedure requires from two to three hours. Colonic irrigations were used in cases where indicated.

As the individual necessities of each case demanded other indirect therapeutic measures were combined with this direct topical treatment. Medicine was given by oral, subcutaneous, percutaneous and intravenous routes. The only oral medicines used were digestive substitution products and hepatic secretagogues. Electricity, dietetics, glandular therapy, hygiene, psychotherapy, exercise or rest were prescribed in certain cases.

But the first bulwark of treatment was insistence on local topical treatment of the stomach, duodenum, biliary tract and colon. The second agent in which we placed some reliance was the autogenous vaccine. Especially were these useful when they gave rise to a specific focalizing reaction reproducing one or more of the presenting symptoms, and those cases in which they occurred averaged better in their results. In 58 cases receiving autogenous vaccines there were 17 cases who gave an unsolicited history of focalizing reactions simulating one or more of the chief complaints. Among these gall bladder pains or soreness was mentioned 13 times, migraine was mentioned 5 times. Pains in a tooth socket followed a vaccine of streptococci obtained from the gall bladder and from the apex of the tooth root in one case. Pain in the tonsillar fossae following a vaccine of streptococci from gall bladder and tonsils in one case; soreness in the appendiceal region was mentioned once and increased joint involvement in a case presenting arthritis was mentioned once.

Of these 17 cases showing focalizing vaccine reactions 70 per cent. showed complete arrest in symptoms as against 64 per cent. for the entire series; 47 per cent. showed complete improvement in findings (as defined later) as against 38 per cent. for the series.

In summarizing the results of treatment by this method, we find complete arrest of symptoms in 64 cases. There was incomplete arrest of symptoms in 31 cases and no relief of symptoms in 4 cases. From an objective side

we find that there is complete improvement in findings based on direct examination of the bile in 38 cases, incomplete improvement in findings in 48 cases and insufficient data on objective findings in 16 cases.

Reviewing the results of treatment we notice a discrepancy in that 64 per cent of cases showed a complete arrest of symptoms and yet only 38 per cent. showed a complete improvement in findings. This has indicated to us the inadequacy of considering simple arrest of symptoms as the criterion of a cure, and emphasizes the need of continuing the treatment faithfully until the pathological findings disappear, otherwise relapse is extremely likely to occur. Again it is interesting to observe that as treatment is continued the complete improvement in findings runs parallel to the complete arrest of symptoms and this, and this only, should be made the criterion of a real cure.

As illustrating some of the points in the foregoing analysis I would like to present briefly a few of the cases studied and treated, with a few words of comment:

Miss E. B.

Aet 43.

Severe prostrating migraine cyclic headache for ten years plus. Has tried many things for relief. Absolutely no preceding infections in past life, except a stuffiness and catarrh in left eustachian tube, which has been under treatment by Dr. Packard. Absolutely normal findings in eyes, naso-pharynx, bronchial tree, lungs, heart, kidneys, pelvic organs and gastrointestinal tract except for the gall bladder and constipation (laxative habit for relief of headache).

Headaches: No causative factor, come without warning, two to four days sick headache, prostrating, and when worst accompanied by dry retching and biliary vomiting. Temporary relief by chologogues. Begins as "thick feeling" in head, then pain first felt over right eye, radiating down temple to mastoid. Soon over left orbital region and radiating to mastoid. (Dr. Packard suggests influence of Arnold's auricular branch of pneumogastric nerve.)

Gall bladder: Physical findings entirely negative. But gall bladder bile found static,

atonic flow, inky black and infected with *Streptococcus veridans* and *B. Coli*. Heavy viscosity of bile with much exfoliation of gall bladder and duct epithelium.

Treatment: Biliary drainage twice a week for two weeks, then once a week for a month, then twice a month. Vaccines every five to seven days with focalizing migraine reaction. Pancrobin for constipation.

Result: Steady progressive improvement; headaches of lighter and lighter severity and of decreasing frequency and general systemic improvement, especially absence of drowsiness.

This case illustrates biliary migraine in its purest form and also the hope of relief which can be offered by this method of treatment.

Mrs. R.

Aet 33.

Operated eight years ago for empyema of the gall bladder. No stones. Drainage operation only, but has drained constantly for eight years. Wears a dressing pad constantly. Was never pain free for longer than a month; usually attacks every four to twelve days. Began to use a silver catheter for relief of pain. To prevent pain the catheter was introduced into the gall bladder by her husband night and morning. It was noticed that when bile was recovered there was no pain, but when thick white mucus and no bile was recovered a pain attack promptly followed. Another surgeon (who referred the patient to us) had tried for three years to close the sinus by cauterization, but unsuccessfully.

We catheterized the gall bladder and obtained golden brown bile with much flocculation for culture and cytology, and checked it up the next day with duodeno-biliary drainage, with the recovery of the same cytology. Dr. Richardson recovered streptococcus hemolyticus and *B. Coli* from both sources.

Vaccine was prepared and administered and gave rise to focalizing gall bladder pain. After the third biliary drainage and the third vaccine injection the sinus closed, but two days later an acute attack of pain occurred with moderate fever and leucocytosis. There were no developments after one week's hospital observation and treatment was then resumed on the following basis: biliary drain-

age daily for three days, twice a week for four weeks, and then every seven to ten days. She has had no pain for nearly five months, and the sinus has remained closed for six months. There has been marked general systemic improvement with especial improvement in color.

This has been a case of greatest interest and instruction to me. First, because I was able to obtain bile directly from the gall bladder from microscopical examination and cultivation. Second, because I could obtain the same type of bile with identical cytology and bacteriology by the duodenal route. Third, that the organism isolated and given as a vaccine had definite therapeutic value in eradicating the focus of infection and in promptly closing her sinus.

Miss M. J. N.

Aet 34.

Six years ago a cholecystostomy was performed with 18 days drainage and the removal of a large stone from the cystic duct and many stones from the gall bladder. The surgeon distinctly remembers the gall bladder was thickened and shrunken. The patient remained well for three months, then recrudescence of symptoms, typical gall bladder syndrome of non-colic type with dull aching from the right costal margin to the shoulder blade. Nausea++, anemia+, and twenty pounds loss of weight. Our studies showed no difficulty in grouping under the gall bladder syndrome. There was upper right quadrant tenderness and rigidity. Specific details of drainage were as follows: 90 c.c. to 200 c.c. of static, atonic, green brown, cloudy bile, emptying intermittently. The bile was infected, the infecting organisms being streptococcus hemolyticus and B. Coli, exfoliative, and contained pus. The common duct was open. Each of six treatments was followed by gall bladder pain and a vaccine focalizing reaction in the gall bladder.

Operation was decided upon, the points of decision being no relief after a month's vacation and the use of vaccine; the surgeon's belief that the gall bladder wall must be infected, and that the gall bladder must be shrunken and thickened beyond its appearance six years earlier. We believed that the gall

bladder must be dilated and distended (e. g. 90 c.c. to 200 c.c. of gall bladder bile).

Cholecystectomy.

Operation:

The gall bladder was found to be distended with thinned out wall, not shrunken or fibrous. Across the fundus of the gall bladder, along the course of the previous drainage, was a band of adhesions between the fundus and the anterior abdominal wall, anchoring the gall bladder. Every time the sore gall bladder tried to contract by itself or by magnesium sulphate it was squeezing against a mechanical difficulty, therefore causing pain.

Postoperative cultures directly from the gall bladder showed very few streptococci hemolytici. A section study from the gall bladder wall failed to show streptococci in the wall.

This case illustrates very well the difficulty in combating well established infection by either medical or surgical procedures. I would say here that this young lady is not out of danger even now, as I found streptococci still present in the ducts and it will only be by persistence in the use of autogenous vaccines and this plan of biliary drainage that I feel hopeful she will eventually win out.

Mrs. E. R.

Act 40.

Chief Complaint—Pain in right upper abdomen radiating to back.

Family History—Father dead—renal—, 53; Mother dead, cancer of breast, 56.

Past Medical History—negative.

Present Illness: Attacks of acute epigastric pain, stabbing and grinding for six years, vomiting of undigested food, two or three times a week at times, but during the last six months about once a month, radiating around right costal margin. No jaundice, but sallow at times. Frontal headache and at times occipital. Eggs and beef disagree. Easily tired, and drowsy most of the time. Bloating relieved by belching, and pressure gives slight relief. Pain is mostly nocturnal, and unrelieved by food. Vomiting of food as eaten, with bile and mucus. Obstinate constipated. Abdomen diffusely tender at McBurney's point and under right costal margin, but gall bladder not felt. Mouth negative, except coated tongue. Stomach—acid slow coming in. T.

65, F. 37, at 105 minutes. Occult Blood + after 60 minutes. Mucus and bile were negative. Fasting content 10 c.c. (green yellow). White blood cells ++. T. 10, F. 0; Occult Blood +.

In two attempted, successive biliary drainages the gall bladder failed to drain in first, and in second only 32 c.c. of dark green turbid bile were recovered. At the same time the patient had an attack of pain similar to the regular attacks. Many crystals were found in the bile, suggesting cholesterol and amorphous bile salts. Culture—B. Coli (heavy). Urine negative; 90 per cent. elimination in three hours, (80 per cent. in two hours). Blood—hemoglobin 85 per cent. White blood count—7,100.

Operation early in September, 1920, disclosed a gall bladder containing 32 stones, brown, hard faceted, pea to marble size. A cholecystostomy only was done. Culture from gall bladder showed B. Coli only.

Postoperative study, November, 1920—gall bladder drainage gave 50 c.c. golden brown, viscid bile, flowing intermittently. Some crystals and some amorphous salts. Culture—B. Coli.

I am presenting this case to illustrate the point that symptomatic relief is not always a cure. The removal of the stones gave symptomatic relief but the subsequent findings of the same organism and the same inability of the bile to hold its salts in solution is far from a cure of the condition. All the factors that are necessary theoretically for the production of stones are still present and there is no assurance that they won't reform. In this group of cases postoperative biliary drainage by this method from time to time has served to clear up the remaining evidence of disturbed physiological chemistry and bacteriology in a number of cases.

Mr. J. D. E.

Aet 42.

For eight years attacks of pain, distress, gnawing, weight, discomfort and bloating with belching; referred to back when severe; one to three hours p.c. and relieved by eating or vomiting. Always worse when tired, and usually worse in spring of year. (Suggests ulcer history.)

Examination: Asthenic, 102/70. Pulse 72. Two dead molars. Gum clean. Tongue clean. Tonsils red and retracted. Heart muscle was weak. The abdomen showed no rigidity but tenderness on deep pressure over gall bladder and appendicial pressure gave tenderness referred to epigastrium. Tuning fork—suggestion of adhesions of stomach to gall bladder region. Spinal tenderness, 3-6 thoracic and 10th thoracic on the left. Hemoglobin 90 per cent. Findings—marked catarrhal duodenitis; catarrhal exfoliatives cholecystitis with stasis and atony. Green black bile, and culture showed streptococcus hemolyticus. Upon removal of tonsils culture showed streptococcus hemolyticus. Vaccine of both were prepared, and have been used alternately, with weekly drainage of gall bladder. The atony has cleared up, and general systemic improvement has followed. Streptococci are no longer recoverable from the bile by culture nor found in fresh or stained spreads.

The case suggests ulcer based on the history, but biliary drainage proved the gall bladder to be the seat of trouble, and the subsequent response to treatment confirmed the diagnosis of masked infection of the gall bladder with complete arrest of presenting symptoms, and final inability to recover the pathogenic infecting organism on repeated culture.

This case also illustrates a primary focus of infection in the tonsils transplanted to the gall bladder producing a secondary focus. It would, therefore, be fallacious to attempt to limit treatment to the removal of the latter focus, if the primary source of infection is ignored, unsearched for, and if found allowed to remain.

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DISCUSSION.

DR. HALSEY DEWOLF: Dr. Fulton has, more or less, called attention to the feature of Dr. Lyon's talk, which I think impresses us all. It is not very often that we read a Medical Manual that seems to present something that has a reasonable basis. This work, which I have seen myself somewhat, and of which I have read in reading his papers, always seems to me to be very practical. I have seen some of his cases. A woman has been through six or seven operable procedures and finally, I judge from what I have heard, she was turned over to Dr. Lyon. He drained her biliary tract, and certainly made a new woman out of her.

I have been impressed with this, and that perhaps is the most valuable outlook on such work as the doctor has been doing along this line, especially in those cases of young people who are beginning to show the biliary syndrome. Cases of cholecystitis may go on to operative procedure and all the trouble which may follow from diseases of the gall bladder, which becomes so tremendously serious. So by drainage and treatment, which the doctor has not had time to dwell upon, you can keep a cystic gall bladder tense and eliminate the infection which would clear up that situation, and we will perhaps fulfill the requirements and purposes which were revised.

We have had very little experience in doing this work here. Dr. Wing has done the actual work, some of it on the service at the hospital and a few cases in our office.

He wants to see this thing spread throughout the country. We have done a little of it and have had some interesting results. I could not tell you anything special. There is

one case which I do want to call attention to. I believe it has been questioned whether the gall bladder is actually drained. Dr. Lyon wrote an article to show that. He has proven that. If you undertake to do this work and watch this method of draining and see this sudden change, which the doctor has shown conclusively, you won't question the fact. Your eyes will prove it to you.

One of our cases was of considerable interest to us because we apparently could not drain the gall bladder, and in washing the duodenum we found streptococci and we could not get drainage. We argued that possibly this gall bladder was shut off and possibly here, there was some gall bladder condition which we could not relieve. The patient was operated upon, and he had an atrophied gall bladder which was definitely abnormal.

It is tremendously interesting to undertake this work, and I can easily see how it must be stimulating to keep it up. It is perfectly evident what he is doing for all of us in coming here to-night and giving us such a talk. He is going to Boston and start the men in the same line.

DR. JOHN W. KEEFE: I want to congratulate Dr. Lyon on this very highly interesting portrayal of this work, which is interesting, and on the enthusiasm which he has shown on the presentation of this subject.

I would like to talk on three hundred and five points, but I feel that the hour is late and the subject deserves much longer and better discussions than we can give him to-night.

The method appears to me as one more valuable type of making diagnosis. Some cases are very acute and definite. We may not be called upon to use these methods. Sometimes a man who is interested in internal medicine or like work has a presentiment that the surgeon is averse to him. Now I think any surgeon ought to be willing to take any information from any part of the science of medicine that can be of benefit to him, and it seems to me that this is one that can be carried out. Oftentimes the laboratory man or the internal medicine specialist might also find it better to work with the surgeon.

There are a few things the doctor men-

tioned that occurred to me. When the gall bladder is removed, we have a dilatation of this muscle that closes the opening of the common duct, and we have a continuous flow of bile into the duodenum, and yet we know that in cases at autopsy the common duct is dilated or that a small portion of the cystic duct which remains has become dilated. I think that the surgeon, the internalist and the laboratory man should work in common.

DR. CHARLES O. COOKE: I would like to say just a word. Speaking from a surgical point of view, we meet the cases late after the early symptoms and we see patients who become acutely ill, which indicates that the disease is no longer in the gall bladder. It appeared to me, from the report of these cases, that Dr. Lyon is getting cases much earlier, before they have become surgical emergencies. The gall bladder itself seems to show few microscopical changes. I have seen a few myself and have been in doubt as to whether the gall bladder should be removed. In regard to the etiology of the disease, Dr. Lyon did not mention pregnancy. In a good many cases we have been able to trace the symptoms to the purpura period. It is thought that the infection took place at that time.

I have been very much interested in this paper.

CASE REPORT

A SALIVARY CALCULUS. (PAROTID).

CHARLES A. McDONALD, M. D.

A few years ago I was studying mumps, including surgical mumps; and several cases of interest were referred to me. Among these was a Salivary calculus of the Parotid gland. Salivary calculi of this gland are so rare that I am reporting it. A woman of thirty-five came to me referred by another physician, with a unilateral swelling of the right Parotid gland. The patient gave a history of several occurrences of the unilateral swelling, and no record of infection or surgical trauma or relation to catamenia. On palpation of the gland, she complained of sensitiveness (over one spot), and by bi-digital examination there was resistance. She said that

she had felt pain and pressure over this area before, but interpreted it as distension. This spot of tenderness and resistance was over the opening of Stenson's duct, and for a short distance posteriorly, I inserted a small probe into Stenson's duct and got crepitus. I thought of a foreign body immediately. I withdrew the probe, and inserted a mosquito forcep, and gripped a hard substance. By mild traction, and rotation, I delivered a calculus. Thin saliva poured out of the duct, and the gland became smaller, and with gentle massage became reduced to normal in a short time. Calculus was in length five-eighths of an inch, and in size and shape not unlike a five-eighths of an inch of a section of a round, wooden toothpick, at the junction of the middle and outer third. The calculus was hard and a little friable, and with the forceps I easily squeezed some particles off the end. I kept this calculus for a long time but never had it examined. The last I saw of it, it had broken into several pieces.

MISCELLANEOUS

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EDITORIALS

Attention is called to a notice appearing in our advertising columns and to the prize that has been offered for the best original essay presented before either the Rhode Island Medical Society or the Providence Medical Association during the year 1921.

It is entirely within the power of the donor to withdraw his offer if there is not enough interest among the members of the profession to make a comparative competition. One or two essays are not enough; there should be one or more at each meeting and aside from its monetary value,

there should be a pride in the profession itself and in its powers to originate and to impel a score of members to enter the lists.

SPECIALISTS.

For many years it has been noted that there has been a great increase in the number of specialists, and that the field of specialism has been divided up more and more. One result of this tendency has been to make it more difficult for the general practitioner to maintain his place in the community. If the modern trend toward extreme specialism is allowed to continue, the general practitioner will disappear. This would be

a calamity, as the wise, experienced general practitioner is a tremendous asset to the community and a "very present help in trouble" to his faithful patients.

There is no question that both specialists and general practitioners are essential in the present development of civilization, and some means should be devised to preserve the two. The Council of Medical Education has considered this question, and finds that there are two factors that have tended to stimulate specialism. One has been that the curriculum in the medical schools has been getting too highly developed and has been tending to teach the special subjects as distinct entities rather than in their relation to general medicine. The other factor has been the lack of any standard required for specialists. The ordinary patient does not inquire into the training of his medical attendant, relying either on the judgment of his friends or on the personal appearance or the self praise of the physician. For this reason specialists have been lured by the extra fee that is supposed to mean special knowledge in his particular branch of the science of medicine.

The Council of Medical Education suggests as a remedy,—first,—the change in the medical curriculum so that the avowed aim of the school shall be to develop general practitioners, and the subject of the specialties be made a part of post-graduate teaching,—second,—the establishment of certain standards for specialists, so that when a patient pays an extra fee to a laryngologist or any other specialist, he will know that that fee represents special knowledge that the recipient has gained by extra time spent in perfecting himself in his special subject.

THE FUNCTIONAL FRINGE OF ORGANIC DISEASES.

An interesting topic for clinical research and discussion would be as follows: Of the symptoms presented by a given patient, what proportion should be properly attributed to the organic mischief at work within him and what to functional perturbations arising simultaneously or subsequently? Or regarding the problem with an eye to therapeutics we may state it a little differently and ask ourselves, what symptoms, as being accidental

in this or that patient, are amenable to cure, and what others as being essential to structural defect, must be borne with equanimity? Everyone will agree that organically similar defects present, in different patients, a various symptomatology. Hence the old saying that it is quite as important to apprehend what kind of a patient the disease has, as it is to know what kind of a disease the patient has. Nor is this all, for in every instance the patient will modify the manifestations of even organic disease by something peculiar to himself, namely, his mental and emotional attitude toward his afflictions, of whatsoever kind they may be.

Take any example that you please: two women, let us say, suffering from demonstrable gastric or duodenal ulcer. One of them will present so few symptoms that you begin to doubt even your weightiest evidence; the other will complain of so many things that you wonder how so small a spring can feed such a sea of troubles. Again you meet a man with arteries so sclerotic that they seem scarcely compatible with life and yet he glides into a mellow old age, while his friend, younger in years and less sclerotic complains of a perfect Iliad of woes. The difference is not in the arteries as such, but in the man who has them.

And herein lies the point of our remarks, that it is so difficult to apportion symptomatology between the structural defect and what one may call, failing a better name, its functional fringe. Our text-books with their rigid delineations of disease forms do not help us much in this perplexing business, and we are left to our native wits which very soon convince us that experience is fallacious and judgment difficult. Frequently the functional fringe gives rise to more poignant suffering than does its organic substrate. But difficult as may be this differentiation between structural and functional symptoms we should attempt to make it, for by so doing we shall render a greater therapeutic service. For if we mistake not, it is precisely in their dealing with these functional fringes of admittedly organic diseases that the irregular healing cults, physical and metaphysical, register their greatest successes. In these fields they gather their richest harvests, not of money only, but of loyalty as well.

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ORIGINAL ARTICLES

OBSERVATIONS FROM 650 OPERATIONS ON THE GALL BLADDER AND BILE DUCT.*

P. E. TRUESDALE, M. D.,
Fall River, Mass.

A review of 650 operations on the bile passages in our clinic has served to accentuate facts of interest and value, not only to surgeons, but to men in general practice as well. Our observations have not revealed new evidence in particular, but they have proved very helpful in clearing up many misunderstandings of gall bladder disease. For us they have served to mark the guide posts more clearly. We understand the picture of gallstone disease better. Treatment is applied earlier and the mortality in cases at all favorable is almost negligible.

From our mistakes we have the lesson brought home again that treatment, whether medical or surgical, is not the all important factor in dealing with this, as with any other disease. The doctrine which promotes understanding of the pathological causes of cholecystitis, which clarifies the associated symptoms and guides one to elect the most advantageous form of treatment cannot be expounded too often. All this is needed in each case, to equip one with a knowledge necessary to determine the course of future events.

Cholecystitis is a very common disease. It is apparently increasing in frequency because it is recognized more often. In our practice, it is encountered more often than appendicitis in patients over twenty-five years of age. Like appendicitis it is a disease caused by infection. The channels through which this occurs are now believed to be the blood stream and lymphatic vessels. That cholecystitis can be produced also by chemical irritants introduced into the blood

current has been demonstrated by F. C. Mann (*Annals of Surgery*, Jan., 1921, p. 54). He injected Dakin's solution intravenously in dogs and found a definite reaction in the gall bladder in a high percentage of experiments.

The relation between typhoid fever and biliary infection has been established since 1880, when Berheim first called attention to it. Chiari, Cushing, Chauffard and others reported from 20 per cent. to 50 per cent. of the cases of cholelithiasis as giving a history of previous attack of typhoid fever. The endurance of typhoid bacilli in the gall bladder is shown by cases recorded by Hunner (*John Hopkins' Hospital Bulletin*, 1899), in which the typhoid organisms were found in the gall bladder eighteen years after the occurrence of the disease. Edwin Henes of Chicago (*Journal A. M. A.*, Dec. 25, 1920), has pointed out the storage function of the gall bladder among typhoid carriers and recommends cholecystectomy to remove the source of supply of the typhoid bacilli which persistently appear in the stools. We have a gall bladder containing a large stone and invaded by cancer in a patient forty years after the typhoid illness (Fig. 1). Although typhoid fever has greatly diminished in frequency during the past decade, cholecystitis has apparently increased. It is known that other organisms, especially the colon bacilli and streptococci, invade the gall bladder mucosa through the circulation.

The biliary apparatus serves as one of the supply stations in the digestive tracts. While the first parts of the alimentary canal are under direct control of the central nervous system, Starling (*The Physiology of Digestion*, p. 130), states that this control gets less and less with the onward progress of food, that the duodenum and small intestines, the mechanism for evoking the secretion of the digestive juices at the exact time and places where they are needed is local or chemical, and occurs in entire absence of any connection with the central nervous system.

*Read before the Washington County Section of the Rhode Island Medical Society, January 13, 1921.

SYMPTOMS OF CHOLECYSTITIS AND CHOLELITHIASIS.

To have the bile station in this closely allied system disturbed by infection, spasm or new growth is to sicken this region of the alimentary tract. Hence it is that gallstone disease in its incipency disturbs digestion. The early symp-

attack the pain and distress is invariably located in the epigastrium. Undoubtedly the explanation of this circumstance is a reflex action at the pylorus producing spasm. In acute cholecystitis spasm of the pylorus is often followed by nausea and vomiting. During this act a stone may be dislodged from the opening of the cystic



Fig. 1

toms are gastric, not hepatic. The patient characterizes the initial pain as a distress and attributes it to "indigestion," a "bilious" attack or "gastralgia," "gastritis" or "dyspepsia." The discomfort is confined to the epigastrium and is an upward pressure, a feeling of suffocation and dizziness with eructation of gas and acid contents. In cholecystitis, as in appendicitis, the symptoms may be gastric for months or years before attention is directed to the real source of the trouble, and at the beginning of an acute



Fig. 2—Lower shadow is appendix

duct or the distended gall bladder may be partially emptied by compression, and relief follows promptly. Thus on many occasions the attacks are of short duration and medical assistance not required.

The role of the pylorus is not definitely understood, but it is probable that at the onset of an attack it is in a state of spasm. Unless the physiological relationship of the stomach and gall bladder is borne in mind, the symptoms are apt to be misleading until the biliary colic be-

comes pronounced, jaundice appears and the physical signs definite. In chronic cholecystitis, spasm of the pylorus is less severe, but probably more continuous. The "short colic" excited by the ingestion of fatty foods and fried materials, which naturally elicit activity of the biliary apparatus, has been ascribed to a contraction of the gall bladder, but undoubtedly the contraction of the pylorus is also a real factor in the disturbance. Gastric distention from gas results and this symptom antedates true biliary colic for long periods. With a continuation of low grade pylorospasm, the musculature of this part of the stomach may become hypertrophied from overactivity and continue its functioned disturbance for some time after the true cause of its overactivity is removed. So that an occasional case of cholecystitis does not enjoy perfect freedom from stomach trouble for some time after operation. It is also well to remember that pylorospasm will not disappear if another cause for its continuation exists. We, therefore, make it a practice to remove the appendix in every case when it is expedient.

In the past gall bladder disease has been discovered very rarely when symptoms were those of indigestion only. It has required localized pain, tenderness and the appearance of jaundice, seldom seen in the ordinary case, to excite suspicion toward the source of the trouble in the gall bladder. Most of these cases which come to operation show long standing disease of the gall bladder and frequently stones in the cystic or common duct.

The character of the pain in acute cholecystitis should be carefully studied. It may be a dull localized discomfort due to a mild degree of irritation and inflammation or it may be an acute, severe, almost intolerable pain, from infection, inflammation or blocking of the biliary ducts. The pain is diffused over the epigastrium, occasionally referred to other parts of the abdomen, but usually directed to the right subscapula region. In these severe cases it comes on suddenly, often in the early morning hours, 3:00 a. m. to 6:00 a. m., and is relieved by hot drinks, vomiting or in extreme cases only by hypodermic use of morphia. In the mild cases, examination may not reveal tenderness over the gall bladder region

unless firm pressure is made by the thumb hooked under the right costal arch and the patient forces the gall bladder downward by deep inspiration. Impact of the examiner's thumb against the inflamed gall bladder causes severe pain. In the more acute cases tenderness in the right upper quadrant of the abdomen is definite and unmistakable.

DIAGNOSIS.

The diagnosis can be made usually from the history and physical signs. There are other systemic conditions which interfere with the function of the stomach in such a manner to make accurate differentiation from early cholecystitis quite difficult and sometimes impossible. Incipient pulmonary tuberculosis, tabes, syphilis, peptic ulcer, renal calculus, appendicitis and intestinal stasis, the abuse of alcohol, tobacco, tea and coffee, frequently produce gastric symptoms not unlike those due to gall bladder inflammation. Careful observations, repeated physical examinations and the use of laboratory agents may be necessary to exclude other diseases and establish the diagnosis beyond reasonable doubt. In particular, the Wasserman test should be made. A positive reaction would not eliminate cholecystitis, but it would call for delay in doubtful cases and a trial of luetic treatment. In recent years, the X-ray examination of the gall bladder has come into prominence. Properly employed and wisely interpreted, it is a most valuable technical assistant. Its worth is in its power to detect the pathological gall bladder, otherwise its aid comes more from the negative evidence it offers than in its positive findings of gallstones. In the average obese or healthy looking individual the absence of other lesions that produce chronic indigestion throws the burden of responsibility upon the appendix or gall bladder, and negative evidence, therefore, becomes important. The differentiation of peptic ulcer, cholecystitis and appendicitis still is difficult in border-line cases and in a small percentage of these we find it impossible always to locate accurately the seat of disease.

Röntgenologists agree that gallstones seldom throw shadows on a röntgenogram. Biliary calculi are composed mostly of cholesterin and do not contain a sufficient quantity of lime salts to

create a shadow or to be differentiated from the surrounding tissues. Here is an exception (Fig. 2), a case in which the gallstones contained a sufficient amount of lime salts to be clearly shadowed. With the positive evidence in the radiogram this patient was entirely satisfied that the cause of her symptoms had been located. Others are very dubious when gallstones are not shown by the X-ray test, and the term "pathological gall bladder" does not carry conviction always in the mind of patient or surgeon. Therefore, inasmuch as the shadows of gallstones are produced only occasionally, the history and physical signs afford the best means of diagnosis. When the X-ray has failed to show the shadows of stones, we have known patients with history and physical signs quite typical to refuse operation. Surgical interference has been postponed many times until the advent of a crisis, because the shadows of gallstones were not apparent in the röntgenogram. Therefore, it is only reasonable that the limitations of the X-ray in making a precise diagnosis of the existence of gallstones should be made known to the patient in advance. Its power to detect pathology of the gall bladder without stones, often of a very troublesome character, is rapidly approaching precision in the hands of expert röntgenologists.

TREATMENT.

There is no wisdom in claiming surgery as a catholicon in the treatment of cholecystitis, nor is there anything to be gained by urging operation upon patients who get along moderately well on medical treatment. The course of the disease, while often progressive, is not always so and the periods of its discomforts are usually intermittent. But where the real enjoyment of life is interrupted and the good things to eat are to be taken at the price of considerable suffering, it is incumbent upon the attending physician to propose the well-recognized measures of our art to remove the source of trouble.

Almost invariably medical treatment will be the patient's choice, and it should be for a reasonable length of time. It would be folly to deny that many, perhaps the majority, of infections of the gall bladder subside and get well without surgical interference. Gastric symptoms, which

are present during the activity of the inflammatory process, subside under medication and a careful diet regime. But there is a relatively large group of patients who suffer from indigestion caused by gall bladder diseases that do not respond to medical treatment except for very brief periods. They go on from the early state of cholecystitis to the midperiod, when gallstones are present, and later to suppuration or gangrene of the gall bladder and common duct disease.

Occasionally patients are unacquainted with the facts during this whole period. They are not aware that the mortality from operation in the early stage is almost negligible, and not much above two per cent. in the midperiod of the disease, but in the more complicated stages the mortality runs up to ten per cent. When these facts are made clear and medical treatment has had a fair trial, fewer patients will delay until operation becomes an emergency procedure undertaken as a last resort and at considerable hazard.

The standard operation is cholecystectomy. Cholecystostomy has had its day. Discussion lasted more than a decade before the wisdom of cholecystectomy as a routine procedure was established and the rare indications for cholecystostomy accepted. If an infected gall bladder is causing enough trouble to warrant operation, it should be removed. The reaction is no more severe, the convalescence actually more comfortable, and the mortality in the hands of surgeons familiar with its technic is not appreciably higher than after cholecystostomy. Rarely the gall bladder may be found adherent to the duodenum, where it has served to cap a perforated duodenal ulcer, or it may be so situated in dense mass of inflammatory adhesions as to make its removal inadvisable. A duodenal fistula has been known to follow the separation of dense adhesions of the gall bladder to the gut. It is a disagreeable and dangerous post operative complication. Failure of a surgeon to understand his limitations in this region has resulted in unhappy consequence more often than is generally believed.

Many writers have advocated drainage of the gall bladder in the presence of acute or chronic pancreatitis, but it seems to us that in such

cases drainage of the common duct is preferable.

There is a growing tendency to omit drainage of the gall bladder region whenever it appears safe to do so. H. M. Richter and J. R. Buchbinder of Chicago (*Journal A. M. A.*, Dec. 6, 1919, pp. 1750, 1751), and J. T. Bottomley of Boston (*Boston Med. & Surg. Journ.*, Aug. 19, 1920, p. 232), have strongly advocated complete closure without drainage after cholecystectomy in selected cases. We have adopted this course in eight cases and with satisfactory results. Realizing the gravity of leaks from oozing surfaces or from the cystic duct, we have limited the operation of complete closure to cases in which the cystic duct was ligated and covered with peritoneum and the bed of the gall bladder, also covered with peritoneum leaving a dry field throughout.

Of our 650 operations on the gall bladder and bile ducts, cholecystectomy was done in 351 cases or 54 per cent. In this series there were seven cholecystectomies for carcinoma of the gall bladder. There were 28 common duct operations for stone. The total mortality was 3.2 per cent. Excluding cancer deaths, 6 in number, the mortality was 2.3 per cent. In our follow-up system, we have found that, whereas, after cholecystostomy 55 per cent were cured, 32 per cent. were improved and 13 per cent. not improved, after cholecystectomy 89 per cent. were cured, 6 per cent. were improved and only 5 per cent. unimproved. Pirie (*London Lancet* 1919, 2, p. 531), believes there is evidence to substantiate the theory that overaction or spasm of the pylorus is often caused by hyperadrenalism. If this is true, it is quite necessary to maintain the finely adjusted balance between the hormones of the endocrine organs after operation. Medical treatment is needed to accomplish this. Careful diet, pleasant surroundings, out door life and scrupulous care to avoid intestinal stasis are the principles upon which good recoveries are to be obtained. Every source of anxiety should be intercepted. There should be no unnecessary sorrows or burdens placed upon the patient, because the factor of worry plays no small part in the post operative issue.

In general, it may be said that cholecystectomy for cholecystitis is a simple and safe operation;

cholecystectomy for cholelithiasis is accompanied by a mortality of about 2 per cent., unless the disease is complicated by long-standing pericholecystitis, cholangitis, suppuration or cancer. Then the risk is considerably augmented. The crux of the problem is the recognition of the frequent association of cholecystitis and cholelithiasis as a cause of indigestion and the wisdom of proposing operation before secondary changes endanger life and when the costs to the patient are sure to be decidedly less from every known angle.

MISCELLANEOUS

FROM THE SIDE LINES.

If I were a doctor I wonder if I would do some of the things that to a layman appear useless and ridiculous.

It goes without saying that the young man just starting in the practice of medicine is not overwhelmingly busy. There is no reason why his experience should be so radically different from the beginner in every other profession. Practices do not grow over night, why therefore should he try to make people think he is rushed to death with business.

To me it seems more sensible to frankly avow, that he is thoroughly competent and eager to be of service. Pretense of numerous patients, important operations, overcrowded offices do not deceive the people.

I understand that advertising is tabooed by the profession, and is not considered ethical, whatever that may be.

Yesterday I was on my way to a movie and passing the office of a young physician I saw him hurriedly leave burdened with two bags and a big tank of something, enter his car and drive madly up the street regardless of traffic, and I rejoiced that he was profiting by someone's misfortune, but ten minutes later as I sat in the theatre, there was the doctor just in front of me, and when I went out an hour later there was his car, bags, tank, and all. This form of advertising was apparently legitimate. If I were a doctor and a young one I would cut out anything that tended to make me ridiculous.

(Continued on page 102)

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

GEORGE S. MATHEWS	<i>President</i>	Providence	PAWTUCKET	
FRANK E. PECKHAM	<i>1st Vice-President</i>	Providence	Meets the third Thursday in each month excepting July and August	
ARTHUR T. JONES	<i>2nd " "</i>	Providence	E. J. MATHEWSON	<i>President</i> Pawtucket
JAMES W. LEECH	<i>Secretary</i>	Providence	CONRAD E. THIBODEAU	<i>Secretary</i> Pawtucket
WINTHROP A. RISK	<i>Treasurer</i>	Providence		

DISTRICT SOCIETIES

KENT			WASHINGTON	
Meets the second Thursday in each month			Meets the second Thursday in January, April, July and October	
J. F. ARCHAMBAULT	<i>President</i>	Arctic	PATRICK J. MANNING	<i>President</i> Wickford
DANIEL S. HARROP	<i>Secretary</i>	Riverpoint	W. A. HILLARD	<i>Secretary</i> Westerly
NEWPORT			WOONSOCKET	
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A. CHACE SANFORD	<i>Secretary</i>	Newport	THOMAS F. BAXTER	<i>Secretary</i> Woonsocket

Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. A. A. Fisher, President; Dr. J. L. Dowling, Secretary-Treasurer.

EDITORIALS

ANENT THE PRINTERS' STRIKE.

After a few months of enforced quiescence by reason of a certain lack of mental coordination in the economic ideas of those who have to do with printing affairs, the psychic dislocation having been reduced, we are enabled to again publish the RHODE ISLAND MEDICAL JOURNAL with every expectation of continuance. Of necessity, however, much material must await other issues.

Some philosopher should have the reasoning power to explain to the common mortal the benefits derived from this unwelcome strike, by the same process of reflection that shows who has benefited when one is accidentally stung by a bee.

THE GIFT OF DR. HARRIS.

The Rhode Island Medical Society has in past years, been the recipient of many generous bequests from deceased Fellows, Doctors Fiske.

Wiggin, Miller, Ely and Radeke are held in grateful remembrance and their names are perpetuated by their generosity.

The erection of our Medical Library Building was made possible by donations from active members of the Society and the Memorial Tablet in our hall bears testimony to the thoughtfulness and interest in our Society which was felt by relatives of Fellows who had in recent years been active in its counsels.

The recent gift of Dr. E. M. Harris, which was announced at the annual meeting, was the largest sum ever received by the Society from a living member; and aside from the sense of satisfaction which must go with such a generous benefaction, the donor must feel gratification at the spontaneous outburst of applause and appreciation which followed the announcement of the gift.

While it is true that charity needs no commendation, there is a satisfaction in *knowing* that one's efforts are appreciated, and the only way to do that is to give our benefactions while still alive, and the Society owes to Dr. Harris thanks, not only for his generosity, but for the inauguration of a way in which Fellows of the Society may show their interest in the Rhode Island Medical Society and receive its active thanks, rather than wait for appreciation by an inscription on a memorial tablet, which, while a satisfaction to relatives, has no particular interest for one deceased.

ALL-DAY MEETINGS OF THE STATE SOCIETY.

The suggestion of the Secretary of the Rhode Island Medical Society in his annual report that the Society should revert to the custom of former years and hold all-day sessions is a most timely one. For a number of years now the quarterly meetings of the Society have been held in the late afternoon, and one or at most two papers have been presented. Such a program is hardly an incentive to induce a member from either the northern or southern parts of the state to make the tedious trip to Providence, unless the subject is of particular interest to him. Lack of interest in the meetings of the Society has been particularly noticeable during the past few years and can be traced almost to

the period when the late afternoon sessions were adopted. If an all-day session could be held with clinics, including surgery, medicine, and the specialties at the various hospitals in Providence and Pawtucket, followed by a luncheon at the Library and the entire afternoon devoted to a series of short interesting papers, such a meeting would make it worth while for any such physician in the state to give up his work for that day and attend the meeting. There is plenty of talent in the Society to present the necessary clinics and scientific papers without going outside of the state for readers, and we feel that the officers of the Society should give this subject their earnest consideration.

DIAGNOSTIC AIDS.

There is a good opportunity for the general practitioner in the out-lying parts of the state to have the advantage of the laboratory of the State Board of Health in his work. By forwarding specimens by mail the burden of the laboratories work is thus removed and prompt reports follow. There is no reason why Wasserman reactions should not be done more. The technique of obtaining the blood is simple and can be carried out easily. With an office estimation of haemoglobin and a simple smear preparation not a few unsuspected cases of primary anaemias will be found. Much quinine might also be saved and many septic conditions brought to light by the elimination of the diagnosis of malaria.

Specimens of fluid from chestappings and abdominal puncture might well be sent in. Probably the general practitioner is not justified in cutting into a tumor mass for diagnosis unless he is prepared to do a radical operation, but the routine examination of pathological material even from minor surgery is desirable. The State Laboratory is not made use of as much as it should be and practically all its work may be made of use by a little study without any post-graduate attendance.

We are hearing a great deal about the future of the general practitioner, and the law of supply and demand will settle his fate quite regardless of theory and printer's ink, but when myelogenous leukaemia is treated as dropsy, and a

septic gall bladder as malaria and extensive skin manifestations in myxoedema are considered syphilitic in origin, is it not time to ask if he is up to par when he is not taking advantage of opportunities that are free for the asking. A good old type of family physician, who had followed a very clever internist at a consultation, was heard to remark: "The only difference between the specialist and the general practitioner is, that the specialist is careful and thorough in his examination."

The use of the State Laboratory, with thoroughness, will do wonders to clear up a diagnosis. If the general practitioner falls by the way-side, let him not forget that his fall will be due largely to his own lack of endeavor.

GOOD SURGERY.

Twice in the last two years the medical profession has been obliged to go before the State Assembly and endeavor to prevent the legislative recognition of chiropractors. It is humiliating to say the least, for physicians who spend long years in study and hospital experience to be obliged to defend themselves against such quackery. Now that diagnosis and treatment is on such a scientific basis, some portion of the public recognizes the regularly trained physician for what he is worth. However, for all time doubtless quacks will flourish, for the gullible are always with us.

The lesson which the medical profession should learn from such experiences is to keep its own house in order. The more successful the physician is in saving life and relieving persons suffering from disease, the less people will be lured by fakers.

The medical profession is open to criticism for the way surgery is done. It is true that there is more good surgery than ever before, but it is also true that too many men, lured on by large fees, undertake things they are in no way qualified to do. Such men are a menace to the public and to the legitimate surgeon. He does unnecessary surgery and does badly what he does do, thereby sacrificing many lives. When a person needs surgical treatment, if he has a competent and honest family physician, he will be turned over to a responsible surgeon. But many people go directly to a surgeon or are

under the care of a physician who also attempts surgery or has some arrangement with a surgeon whose ability may at least be questionable.

How can the public know who is qualified and who is not?

Already something along this line is being done by the American Medical Association Education Committee.

Every man who pretends to do major surgery should have had a prescribed course of surgical study and have actually done under supervision surgical operations of all kinds in a hospital before being allowed to practice surgery. Whatever the length of this course be, or its character, at its end he should receive a degree indicating that he is a qualified surgeon. This title should be allowed to be displayed in his office or perhaps on his sign. The public would then be able to recognize for themselves who is and who is not qualified. This principle should hold true of surgical specialties as well.

It would be gratifying to believe that physicians are of such a character that none of them would undertake an operation which they are not qualified to do, but such is not the fact and the medical profession must protect itself against such practice or the public will lose faith in all doctors, good and bad.

SOCIETY MEETINGS

RHODE ISLAND MEDICAL SOCIETY.

The annual meeting of the House of Delegates was held May 19th, 1921, at 4:30 P. M. in the Medical Library Building.

The minutes of the previous meeting having been published in the transactions in the JOURNAL, it was unanimously voted to omit further reading, and the House passed to the Election of Officers. The following officers were elected:

President—Dr. George S. Mathews.

First Vice President—Frank E. Peckham.

Second Vice President—Arthur T. Jones.

Treasurer—W. A. Risk.

Secretary—J. W. Leech.

Committee on Arrangements—Charles A. McDonald, Paul Appleton, Alex M. Burgess, Treasurer.

Committee on Legislation, State and National—Frank T. Fulton, Herbert E. Harris,

Henry L. Johnson, President and Secretary, ex-officio.

Committee on Library—Herbert G. Partridge, John E. Donley, Roland Hammond.

Committee on Publication—Frederick N. Brown, Editor, *R. I. MEDICAL JOURNAL*; W. A. Risk, Business Manager, *R. I. MEDICAL JOURNAL*; F. V. Hussey, President and Secretary, ex-officio.

Committee on Education, State and National—Charles O. Cooke, John G. Walsh, Lucius C. Kingman, President and Secretary, ex-officio.

Curator—Carl D. Sawyer.

Committee on Necrology—William P. Buffum, Jr., Charles L. Phillips, John F. Kenney.

Auditor—B. H. Buxton, for two years. Delegate and Alternate Delegate to A. M. A., for two years—J. E. Mowry, George A. Matteson.

Historian—C. H. Leonard. The report of the Council was read by the Secretary and accepted. The annual report of the Secretary was accepted and placed on file, as follows:

ANNUAL REPORT OF SECRETARY.

In accordance with the constitution and by-laws, I beg leave to submit herewith the annual report of the Secretary upon the condition and activities of the Rhode Island Medical Society.

The regular quarterly meetings have been held and fairly well attended, the September meeting being held at Butler Hospital, through the courtesy of that institution's Board of Trustees.

There are at present 382 active members, 27 non-resident members, 9 honorary members.

The death roll of the Society since our last annual meeting has been heavy and unusual in the deaths of two officers of the Society—Dr. Herbert Terry, who honored the office of First Vice President, died Aug. 24, 1920, mourned by his professional colleagues throughout the state, and especially by his fellow officers of this Society, who valued highly his counsels.

Dr. William G. McCaw, for many successive years Curator of the Rhode Island Medical Society, died January 2, 1921. The duties of his office of late years, since the specimens have been housed in the Biological Department at Brown University, were practically negligible,

but Dr. McCaw ever maintained a lively interest in his office and desired its perpetuation for sentimental reasons which the Society honored by his annual re-election. The complete obituary roll is as follows: Clarence M. Godding, May 28, 1920; Herbert Terry, August 24, 1920; William G. McCaw, January 2, 1921; James Edmund Sullivan, October 8, 1920; Walter G. Sullivan, February 3, 1921; Eldredge G. Carpenter, March 30, 1921; William H. Bowen, April 14, 1921.

The following physicians were dropped from membership in the R. I. Medical Society for non-payment of dues on December 15th, 1920: Edmund Abbott, Charles H. Boucher, Frank T. Calef, Carl R. Gross, Herbert B. Horton, Fred B. Jewett, Ralph F. Lockwood, Thomas J. O'Brien, Alexander C. Sanford, Charles A. Stearns, John H. Sweet, Conrad E. Thibodeau.

In reviewing the work of the Society during the past year, one cannot fail to be struck by the paucity of original work represented in its transactions. Four medical papers were presented at the sessions and three of them represented the work of Fellows of this Society. This evidences a lamentable lack of interest in the Society's work, a failure of the Society to attract interest or both. It is asking a good deal of a busy physician in Newport, Westerly, or Woonsocket to give up the best part of a day from his practice to come to Providence to listen to a single paper as representing the program of a quarterly meeting of a medical society. I venture to suggest, therefore, that there be given serious consideration of the advisability and feasibility of reverting to the custom of former years and of making our meetings all-day sessions. Such a session could profitably be divided into clinics in the morning with luncheon at the library and a half-dozen short papers on a variety of subjects which would appeal to the members.

I must also point out the lack of coöperation between the component District Societies and this Society. According to the charters of the former Societies, as granted by this Society, the officers of the District Society are required to keep the officers of the State Society in close touch with affairs of the District, and on the other hand it is equally the duty of the officers

of this Society to make personal visits to the District Societies and so foster closer relationship between the two. The Secretaries of the District Societies should realize that growth of the State Society is dependent upon their growth and that the membership roll of the State Society cannot be augmented except by their new members. It is, therefore, highly desirable that the Secretary be kept informed of new members in the District Societies in order that invitation to join the State Society may be extended to them.

J. W. LEECH, *Secretary*.

REPORT OF THE STANDING COMMITTEES.

"As Chairman of the Committee of Arrangements, I wish to report that reservations have been made for the annual dinner at the Turks Head Club, June 2, 1921, at 6:30 p. m."

R. G. BUGBEE, *Chairman*.

"The Committee on Legislation begs leave to report that at the March meeting of the Society it was directed to appear before the Legislature and oppose that provision of the proposed amendment to Workmen's Compensation Act which fixed the maximum compensation for medical service at two hundred dollars. The committee asked for a hearing before the Judiciary Committee of the Senate, which was granted. The committee, together with two or three other physicians, whose attendance was requested, went before the committee and set forth their arguments and also answered many questions asked by Senator Sherwood. The bill became a law.

"When a hearing was advertised on the Chiropactice Bill, so-called, the committee believed that it was its duty to oppose the measure. A circular letter was sent to every physician in the State asking them to come to the hearing and oppose the measure. The committee also made personal efforts to secure the attendance of physicians, especially as speakers. A great many physicians were in attendance and forceful arguments were presented. The bill did not become a law."

CHARLES V. CHAPIN,
Chairman.

LIBRARY COMMITTEE.

"From June 1, 1920-May 18, 1921, the Library received 363 bound volumes; reprints 144, pamphlets 384, visitors at Library 1,834. Donations were received from Rhode Island Medical Journal, Rhode Island Ophthalmological Society, United States Government, American Academy of Ophthalmology and Oto-Laryngology, American Association Genito Urinary Surgeon, American Laryngological Association, American Laryngological Rhinological and Otological Society, American Medical Association, American Pediatric Society, American Proctologic Society, Boston City Hospital, Brown University Library, Brown and Sharpe Mfg. Co., Congress American Physicians and Surgeons, Connecticut State Medical Society, Connecticut State Department of Health, Lane Medical Library, San Francisco, Massachusetts General Hospital, Massachusetts, State Department of Health, Modern Hospital, Publishing Company, New York University, Pennsylvania State Department of Health, Peter Bent Brigham Hospital, Philadelphia Academy of Surgery, Rockefeller Foundation, Dr. F. W. E. Burnham, Winnipeg, Mr. W. W. Chapin, Providence, Mrs. E. C. Gates, Providence. Also from the following Fellows: H. P. Abbott, F. N. Bigelow, S. S. Burton, C. V. Chapin, R. Hammond, C. S. Mathews, W. A. Risk, F. T. Rogers, J. E. Webb, S. A. Welch, R. S. Wilcox, and from Dr. Herbert Terry, shortly before his death."

GEORGE S. MATHEWS, *Chairman*.

Committee on Publication, Dr. Frederick N. Brown, Chairman, made a verbal report. He reported that a proposition from the Editor of the Boston Medical and Surgical Journal, that the Rhode Island Medical Journal affiliate with the former Journal, was received, and the Committee on Publication voted not to accept the invitation. Dr. Brown spoke of the difficulty in getting editorial material from his associate editors, and urged greater promptness and interest on their part.

Committee on Education, no report, Dr. J. H. Ladd, Chairman.

Dr. Charles H. Leonard reported, as Chairman of the Committee on Necrology, showing year being elected a Fellow of the Society, date of death and age: 1883—Clarence Miles Godding.

Providence, May 28, 1920, aged 62; 1880—Herbert Terry, Providence, August 24, 1920, aged 65; 1878—James Edmund Sullivan, Providence, October 8, 1920, aged 75; 1881—William John McCaw, Providence, January 2, 1921, aged 65; 1898—Walter Green Sullivan, Providence, February 13, 1921, aged 47; 1904—Elbridge Gerry Carpenter, East Greenwich, March 30, 1921, aged 71; 1863—William Henry Bowen, South Scituate, April 10, 1921, aged 81.

Dr. A. H. Miller for the Committee on Hospitals reported that the third survey of the Hospitals was being undertaken by the Council on Medical Education of the A. M. A.

Verbal reports were made by the Councillors—Dr. Ira D. Hasbrouck, Councillor Kent County Medical Society; Roland Hammond, Councillor Providence Medical Association; F. I. Payne, Councillor Washington County Medical Society.

Dr. Hoyer moved that the annual dues for the coming year be fixed at ten dollars (\$10). It was seconded and so voted. Dr. Day moved that the income of the Endowment Fund for the present fiscal year be appropriated to the Library Committee for the purchase of books and bindings, subject to approval by the Council. It was so voted and referred to the Council for ratification.

COMMUNICATIONS.

1. The following resolution presented by Dr. A. H. Miller, was passed by the House of Delegates: "*Resolved*, That the R. I. Medical Society favors the establishment by the American Medical Association of a section on Anaesthesia and recommends that its House of Delegates instruct its representative of the House of Delegates of the American Medical Association, which is to meet in Boston, in June, 1921, to act in accordance with this view."

2. A letter from the Penal Charitable Commission, by Dr. A. H. Harrington, Superintendent of the State Hospital for Mental Diseases, inviting the R. I. Medical Society to hold its September meeting at Howard, was read by the Secretary. It was voted to accept the kind offer of the Board.

3. A communication from the Secretary of the Council on Health and Public Instruction, suggesting the appointment of a committee from

this Society, made up of one Health Officer, one Ophthalmologist, one Pediatrician, and two general practitioners, to be known as a Committee on Health Problems in Education, which was to co-operate with a committee from the R. I. Educational Society, was read by the Secretary. It was voted that the President be appointed to appoint such a committee.

4. An invitation from the International Eugenic Congress to the R. I. Medical Society, to send a delegate to the Congress, was laid on the table.

Report of the Board of Trustees of the Medical Library:

"As Chairman of the Board of Trustees of the Medical Library Building, I beg leave to report that the only repairs of any consequence were those made to the roof. Continued leaking around the flag pole made its removal necessary and we now hope to have no further trouble in that direction. A new pole will probably be placed in front of the building in the near future.

"The walls in the reading room, halls and dining room are becoming badly discolored and will need painting as soon as the Society can afford it.

There have been thirty-four meetings held during the year, besides various committees which have come together informally."—GEORGE S. MATHEWS, *Chairman*.

Respectfully submitted,

JAMES W. LEECH, *Secretary*.

COUNCIL.

The annual meeting of the Council was held May 19th, 1921, at 4:15 p. m., in the Medical Library Building.

The minutes of the previous meeting having been published in the transactions of the Society were omitted by unanimous vote.

The annual report of the Treasurer was presented by Dr. Henry J. Hoyer, as follows:

January 1, 1920:

CHASE WIGGIN FUND.

By indebtedness R. I. Medical Society. . \$6,892.21

H. G. MILLER FUND.

By indebtedness R. I. Medical Society. . \$5,359.10

Interest 250.00

\$5,609.10

J. W. C. ELY FUND.

1 Bond So. California Edison Co.....	\$980.00
Interest on same	50.00
3 Shares Mechanics National Bank stock	480.00
Interest on same	24.00
	<hr/>
	\$1,534.00

. ENDOWMENT FUND.

Cash on hand	\$1,909.40
Donations	95.76
Liberty Bonds 3 1/2%	350.00
Interest	77.58
	<hr/>
	\$2,432.74

PRINTING FUND.

By indebtedness R. I. Medical Society..	\$1,677.52
	<hr/>
	\$1,677.52

SINKING FUND.

Cash on hand	\$1,472.06
By indebtedness R. I. Medical Society..	1,427.67
Interest	59.46
	<hr/>
	\$2,959.19

RECEIPTS, 1920.

Cash on hand January 1	\$2,148.14
Annual dues	3,720.00
Donations	805.30
Ely Fund, interest on bonds	74.00
Interest on daily balance	53.19
	<hr/>
	\$6,800.63

January 1, 1921.

CHASE WIGGIN FUND.

To loan R. I. Medical Society	\$6,892.21
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H. G. MILLER FUND.

To loan R. I. Medical Society	\$5,359.10
Rent, H. G. Miller room	250.00
	<hr/>
	\$5,609.10

J. W. C. ELY FUND.

1 Bond So. California Edison Co.....	\$980.00
8 Shares Mechanics National Bank stock	480.00
Paid R. I. Medical Society for Journal	74.00
	<hr/>
	\$1,534.00

ENDOWMENT FUND.

Cash on hand	\$2,082.74
Liberty Bonds 3 1/2%	350.00
	<hr/>
	\$2,432.74

PRINTING FUND.

To loan R. I. Medical Society	\$1,677.52
	<hr/>
	\$1,677.52

SINKING FUND.

Cash on hand	\$1,531.52
To loan R. I. Medical Society	1,427.67
	<hr/>
	\$2,959.19

EXPENDITURES.

Interest on bonds	\$144.00
Collations	518.80
Printing and postage	88.62
Expenses of secretary	75.00
Insurance	15.00
Meeting expenses	43.31
Librarian	1,134.00
Supplies and expenses of Library	46.44
Janitor	384.00
Expense of janitor	192.05
Light	34.83
Telephone	54.68
Fuel	553.67
Incidentals	41.00
Books	44.00
Journals (Ely Fund)	60.25
R. I. Medical Journal	400.00
	<hr/>
	\$3,829.65
Cash on hand to balance	2,970.98
	<hr/>
	\$6,800.63

On motion of Dr. Day, duly seconded, it was moved and seconded that the report be accepted and placed on file.

On motion of Dr. Rogers, seconded by Dr. Day, it was voted that the Treasurer be authorized to retire at the end of the legal limit, as many of the Rhode Island Medical Society Library Building Bonds, as possible. It was so voted.

Adjourned.

SPECIAL COUNCIL MEETING.

A special meeting of the Council was held immediately after the House of Delegates, May 19, 1921, to transact business referred to it by the House of Delegates.

It was voted to concur in the recommendation of the House of Delegates, that the interest of the Endowment Fund, for the present fiscal year, be appropriated for the use of the Library Committee to purchase books and bindings.

It was voted to make the Librarian's salary \$25.00 per week.

Adjourned.

J. W. LEECH, *Secretary*.

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was called to order in the Medical Library by President F. T. Fulton on March 7, 1921, at 8:55 p. m.

The records of the previous meeting were read and approved. An expression of appreciation from Mrs. McCaw for the memorial on the death of Dr. William J. McCaw was read. The applications having been approved by the Standing Committee, the Secretary was instructed to cast one ballot for the election of Vasilion K. Papavasilion and William Walter Cummings. The President announced the appointment of Dr. Arthur Hollingworth and Dr. Charles F. Deacon a committee to prepare a memorial on the death of Dr. Walter G. Sullivan.

The President requested Dr. Mowry to explain the circumstances of the private hearing on the proposed changes in the Workmen's Compensation Act, to which Dr. Mowry responded by announcing that a committee from St. Joseph's, the Memorial, and the Rhode Island Hospitals were to meet with the Judiciary Committee on Wednesday on the rising of the Senate.

Dr. C. H. Leonard presented a specimen of vesical calculus recovered post-mortem without antecedent symptoms. Dr. L. C. Kingman reported six cases of gastric ulcer and two of gastric cancer which were discussed informally by Dr. C. H. Leonard and Dr. William R. White. Dr. W. H. Palmer reported two cases of leukemia of different types, one improved by X-ray treatment. Dr. C. O. Cooke reported a case of fracture of the base of the skull developing hemiplegia and later clearing up. The first paper of the evening, "Salivary Calculus," was read by Dr. W. Louis Chapman. Several calculi were exhibited with X-ray photographs, also a gall bladder with single stone.

The discussion brought out the report of several cases of salivary calculus; one in Stevens Duct, one in base of tongue, and one spontaneously discharged. Drs. Charles McDonald, J.

W. Leech and J. E. Kerney took part in the discussion which was closed by Dr. Chapman.

Dr. A. H. Ruggles presented a short paper on "A Case of Luminal Poisoning," showing the cumulative effects of an average dose of luminal over a prolonged period producing ataxia, slurring speech, and mental dullness lasting over a period of about two weeks. The discussion by Drs. P. Appleton, H. B. Sanborn, C. A. McDonald, D. F. Gray, and W. H. Palmer was closed by Dr. Ruggles, the conclusion being that luminal has cumulative and toxic properties that demand careful dosage, three grains in twenty-four hours being considered the maximum. It was agreed that in epilepsy the drug is most efficient.

The President read a notice of a meeting of the medical section of the Rhode Island Medical Society to be held March 22, 1921, and also announced that Dr. Kerney was prepared to demonstrate an apparatus for neutralizing a phenomena to those interested. The meeting adjourned at 10:30 p. m. Attendance: Fifty-five members and four guests. Collation was served.

Respectfully submitted,

RAYMOND G. BUGBEE,
Secretary Pro Tem.

April 4, 1921.

The regular monthly meeting of the Providence Medical Association was held at the Rhode Island Medical Library, April 4, 1921. The meeting was called to order by the President, Dr. F. T. Fulton, at 8:50 p. m.

The records of the previous meeting were read and approved. The following resolution was adopted: It is hereby resolved that the Providence Medical Association endorses and supports the Student Nurse recruiting movement to be carried out in this State the week of April 10.

Dr. Charles F. Deacon read a memorial on the death of Dr. Walter G. Sullivan, which was adopted.

Application for membership of the following men having been approved by the Standing Committee the Secretary was empowered to cast one ballot for their election: James Hugh Bartley, Jr., John F. Gannon, Eliot Ashley Shaw.

Dr. Mowry reported for the Committee on

Legislation that he had attended meetings of the committees of the legislation on the Workmen's Compensation Act and Chiropractice Bills and that action satisfactory to the medical profession could be expected on the Chiropractice Bill, but not on the Workmen's Compensation Act Bill.

Dr. I. Chandler Walker of Boston gave a talk on "Some Practical Points in the Treatment of Hay Fever and Bronchial Asthma." He spoke of the seasons and plants causing and treatment of hay fever, the natural causes of asthma with methods of diagnosis, treatment and prognosis and with considerable detail about the more common proteins causing sensitization, and showed several patients that his assistants applied skin tests to during the talk.

Drs. White and Fulton asked questions and Dr. Perkins discussed the subject, Dr. Walker closing the discussion. Dr. Fulton reported for a committee of the Society who, at a request of the Massachusetts Medical Society, were collecting funds for the meeting of the American Medical Association in Boston next June. The meeting adjourned at 10:20 p. m. Attendance: Eighty-two members and seven guests. Collation was served.

Respectfully submitted,
PETER PINEO CHASE, *Secretary*.

SECTION IN MEDICINE.

The annual meeting was held in the Medical Library on Tuesday, March 22, 1921, at 8:45 p. m., Dr. D. Frank Gray in the chair. The speaker of the evening was Dr. James H. Means, of Boston, Mass., whose subject was "Hydraulic Principles of the Circulation in Normal and Abnormal Conditions," which was illustrated by charts. Dr. Means' paper was very interesting and was discussed by Drs. Mowry, F. N. Brown, G. S. Mathews, Burgess, and Perkins. This was the largest meeting of the Section in Medicine since its first meeting. Election of officers resulted as follows:

Chairman—Dr. Charles A. McDonald, 160 Waterman Street, Providence, R. I.

Secretary-Treasurer—Dr. Creighton W. Skelton, 266 Broad Street, Providence, R. I.

A collation followed the meeting.

A regular meeting of the Section in Medicine was held in the Medical Library, Tuesday, April 26, 1921, at 8:45 p. m., Dr. Charles A. McDonald, Chairman, presiding. The paper of the evening was on "Carcinoma of the Stomach," by Dr. Charles L. Scudder, Surgeon-in-chief, Massachusetts General Hospital, and Professor of Surgery, Harvard Medical School. Dr. Scudder urged public education in regards to cancer, early diagnosis of these conditions with the aid of the X-ray, and early surgical interference. The Chairman instituted an innovation by passing a book among the members to write questions for Dr. Scudder to answer. These questions were interesting and were answered by Dr. Scudder. The "Book of Questions" is the right thing in the right place, and all the members took to it kindly. The discussion of Dr. Scudder's paper was opened by Dr. Gray, followed by Drs. Hussey, Gerber, McGuirk, E. B. Smith, and George S. Mathews. There was a large attendance. A collation was served. A rising vote of thanks was extended to Dr. Scudder for his paper.

A regular meeting of the Section in Medicine was held Tuesday, May 31, at 8:45 p. m., at the Medical Library, Dr. Charles A. McDonald, Chairman, presiding. Dr. E. W. Taylor, Professor of Neurology at Harvard, read a paper on "Psycho-Therapy," which was very interesting. Dr. Taylor's paper was discussed by Drs. Sanborn, Perkins, Donley and Professor Jones of Brown. The next regular meeting will be held the fourth Tuesday in October. These meetings have become very interesting ones, attendance being over 40, and the Chairman has invited some very eminent men to address us in the meetings to come in the fall. All Fellows in the R. I. Medical Society are eligible to membership in this Section. Send the Secretary your name and address, together with one of Uncle Sam's green-backs, and "Your name will be written there." CREIGHTON W. SKELTON, M. D.,

Secretary-Treasurer.

RHODE ISLAND OPHTHALMOLOGICAL & OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otological Society

was held at the Rhode Island Medical Library on April 14, 1921, at 8:30 p. m.

The papers of the evening were, "Ocular Tuberculosis," by Dr. J. W. Leech, and "Myringotomy," by Dr. N. D. Harvey. A case of rare laryngeal disease was demonstrated by Dr. C. J. Astle. The papers were thoroughly enjoyed and discussed by all present.

Meeting adjourned at 11 o'clock.

J. L. DOWLING, M. D., *Secretary*.

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly meeting of the Washington County Medical Society was held at the Colonial Club, Westerly, Thursday morning, April 14, 1921, with fifteen members present.

In reply to the Secretary's letter regarding the 50 per cent. settlement with the men who went into Government Service, letters were read and remarks made and it was finally voted that the matter was closed. Dr. Champlin spoke briefly regarding the hospital project. Dr. Manning spoke of attending the hearing on the Chiropractice Bill. Drs. Webster and Hillard also attended this hearing.

Dr. Arthur H. Ruggles, of Butler's Hospital, Providence, gave a very interesting and instructive address on "Nervous and Mental Diseases" and received a rising vote of thanks.

Adjourned and dined.

W. A. HILLARD, M. D.,
Secretary.

HOSPITALS

RHODE ISLAND HOSPITAL.

Drs. Gardner T. Swarts, Herman C. Pitts, Carl D. Sawyer and James F. Boyd have recently returned from Pittsburgh, Pa., where they spent a week studying radium and its application. The Pittsburg Chemical Co., which completes the final extraction of radium, gives a course on the methods of application and handling.

The Rhode Island Hospital has ordered a supply of radium and expects to receive it some time in June.

Dr. James F. Boyd, Röntgenologist, will leave for the Mayo Clinic, May 14.

An appliance shop has been established at the Out-Patient Department under charge of Mr.

Oke Lundine, where orthopedic and other apparatus will be made for the Out-Patient Service; also special splints and other apparatus for the patients in the hospital, and such other apparatus as can be made for other physicians.

The Crayford Allen Branch of the Rhode Island Hospital at East Greenwich opened on May 1. Many orthopedic cases, especially tubercular bone diseases, are given the fresh air and sunshine treatment at this branch of the hospital. Many undernourished children and children with "T. B." glands and similar conditions improve wonderfully under the ideal conditions of sunshine, fresh air, nourishing food and careful observation.

Work on the new Jane Frances Brown Building for Private Patients has been at a stand-still for several weeks on account of the strike of the Building Trades. Grading about the new building is progressing satisfactorily.

The regular monthly meeting of the Surgical Staff was held at the hospital May 4.

The Gynecological Department held its regular monthly meeting at the hospital Wednesday, May 4, 1921.

The following Staff changes have taken place recently:

Dr. Edmund D. Chesebro, Visiting Physician to the hospital, has resigned after thirty years of service. Dr. John G. Walsh, Physician, O. P. D., has resigned. Dr. George E. Teehan, Assistant Surgeon, G. U. Dept. O. P. D., has resigned and is doing eye, ear, nose and throat work in Boston. Dr. Ralph H. Hankins, Dental Externe, has resigned. Drs. Charles S. Turner and William H. Palmer have been appointed Assistant Visiting Physicians. Drs. Alexander M. Burgess, Elihu S. Wing and Paul C. Cook have been appointed O. P. D. Physicians. Drs. C. R. Doten, Roswell S. Wilcox and Carl D. Sawyer have been appointed Surgeons to the Skin Department. Dr. Hiliary J. Connor has been appointed Dermatological Externe. Drs. Walter O'Keefe and Harold C. Miner have been appointed Medical Externes. Dr. Alfred F. McAlpine has been appointed Assistant Anaesthetist. Drs. Louis M. Forbes, William A. Greenleaf, John B. Laflamme, Raymond A. Lundgren, Ambrose H. Lynch, James F. Mitchell, Edward C. Morin, Eli Paquin,

John J. Rouslin, Joseph A. Streker and Joseph P. Massicotte have been appointed Dental Externes.

Dr. Ralph DiLeone started a regular two-year appointment as interne on February 1, 1921. Dr. Edward G. Melvin started his service as interne March 1. Drs. Henry A. Joyce and Francis J. King started regular internships April 1.

The regular meeting of the Rhode Island Hospital Staff was held Monday evening, July 11.

Drs. Henry McCusker and John Helfrich began regular two-year interne appointments July 1, and Dr. Hugo M. Kersten began the eight months' substitute appointment on the same date.

Dr. Deering G. Smith, who completed the substitute internship at this hospital April 1, 1921, and a Providence City Hospital appointment July 1, has opened an office in Nashua, N. H.

Dr. Arthur J. Attridge, who completed a two-year internship July 1, has taken a position at Scituate, R. I., for the contractors who are building the new dam.

Dr. Michael J. O'Connor, who completed a two-year internship July 1, will begin an internship at the Providence Lying-in Hospital August 1.

WILLIAM O. RICE, M. D.,
Assistant Superintendent.

The regular quarterly meeting of the Staff Association was held at the hospital, Monday, July 11, 1921, at 8:30 p. m.

NORMAN C. BAKER, M. D.,
Sec. Staff Ass'n.

(Concluded from page 91)

If I were a doctor and a busy one I think I should claim my right to a certain amount of time for rest and recreation, and I should not be ashamed or afraid to assert my right.

A friend of mine went home to lunch the other day and found his wife doubled up with cramps, a telephone to the doctor found him in his office, but he had an important consultation on and could not come for several hours. In the meantime let the wife do so and so. Well "so and so" did well, and in a short time my friend felt it safe to take his usual Saturday afternoon exercise at the golf club. At the third hole he came up with the doctor and his consultation. Now he has another family physician, and I

don't know as I blame him. I believe a frank statement by the doctor would have been just as satisfactory and the "so and so" just as efficacious.

If I were a doctor I think I would try to be truthful, especially if I were likely to be found out if I fibbed.

If I were a doctor and an old one I would not stay too long in the harness.

I had rather be a "was" than a "has been."

Dr. A. was a good doctor, implies that his patients regret that his services are no longer available.

Dr. A. has been a good doctor, means that he is no longer one and his present ability is in doubt, in the race for supremacy he has been passed by more youthful competitors.

If I were a doctor I should try to doctor on business principles. Of course I know that many times no payment is expected or requested, but aside from charitable work I should charge for my services and advice; I should present my bills promptly and regularly, and moreover, expect payment. An old Scotchman once said, "It is not what you know that counts so much as what people think you know, and your services are worth just as much as you are."

I should make my services worth while by placing a value upon them. When my doctor does me a good turn when ill and then for months fails to send me a bill I begin to wonder if he places little value on his services and to think that I probably would have recovered quite as quickly without his aid and when the bill does arrive I have forgotten how ill I was and rather wonder at his nerve in sending a bill for such a trifling service.

If I were a doctor I would never prescribe a proprietary medicine at any rate not in the original bottle, and thus advertise my reliance on some manufacturing firm or chemist.

Dr. Ely of revered memory once said that, "the family physician was now like a sign-post to point the way to some specialist."

If I were a doctor I would not point the way to a druggist. I would show them the way myself.

If I were a doctor I think I should do all these things, but probably I would not have the nerve.

THE RHODE ISLAND MEDICAL JOURNAL

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Issued Monthly under the direction of the Publication Committee

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PROVIDENCE, R. I.,
JULY, AUGUST, SEPTEMBER, 1921

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ORIGINAL ARTICLES

SOME PROBLEMS IN THE TREATMENT OF DIABETES.*

By ALEX M. BURGESS, M. D.

The revolution in the treatment of diabetes which has occurred within the last decade is a subject with which all my hearers are familiar. In its essence it involves two cardinal principles, which may be indicated by the two words—*undernutrition* and *education*—and with these two key words we shall associate the names of two men to whose efforts the development and establishment of these principles is largely due,—Allen and Joslin. The experimental work of Allen has determined the value of undernutrition as the essential factor in increasing tolerance for carbohydrates. The carefully controlled clinical work of Joslin has demonstrated that upon the education of the patient in the essentials of dietetics as applied to the disease depends the practical success of the treatment. Superficially the problem seems a simple one. First, in order that the patient live in a condition which we may be allowed to call relative “normalcy,” it must be possible for him to acquire by systematic underfeeding sufficient tolerance for food so that on a diet which will produce enough energy and supply enough proteins to maintain his physical efficiency he can still be free from an abnormal or increasing amount of sugar in his blood stream with its attending symptoms and deleterious effects. Second, it must be possible to so instruct the patient that he can understand the importance of undernutrition, can arrange his diet to carry it out practically, can detect the appearance of glycosuria and can realize the importance of constant watchfulness on the part of himself and his physician, with proper tests as to weight,

blood sugar, etc., from time to time. If these conditions can be fulfilled the diabetic may look forward to the future with confidence.

It is perhaps hardly justifiable to review with you, even for the sake of completeness, the usual scheme of dietetic treatment of the average case of diabetes. The initial elimination of fats, if necessary, the so-called fast, allowing tea, coffee, clear broth and water, the determination of tolerance for carbohydrate and protein by the gradual addition of these substances five or ten grams increase each day, and the final introduction of a limited quantity of fat into the diet; you are doubtless thoroughly familiar with it. It will, I believe, be wiser for me to confine my remarks to certain phases of the subject which have impressed me as of especial interest in the observation and study of patients suffering from diabetes during the past six years. I shall with your permission, discuss the following points:

- 1—The treatment of the poor and ignorant.
- 2—The treatment of diabetes in the hospital.
- 3—Diabetes in childhood.
- 4—Diabetes and the emotions.
- 5—Diabetes and pregnancy.
- 6—Diabetes and surgical operations.
- 7—Results of routine treatment. Types.

THE TREATMENT OF THE POOR AND IGNORANT.

1. There is perhaps no disease in which the success of the treatment depends more upon the patient than it does in the case of diabetes. The doctor lays all his cards, as it were, face upwards upon the table. He gives the patient the most painstaking instruction in the nature of his disease, the meaning of symptoms and the methods of treatment, but, except during his hospital stay, the execution of the orders is and must be left in the hands of the patient. For this reason intelligence, courage and patience are essential. The treatment of diabetes among the ignorant,

*Read before The Friday Night Club of Providence, March 18, 1921.

therefore, is often extremely discouraging and at times practically impossible. Given the second and third factors, courage and patience, however, and a great deal can be accomplished, even if the intellectual level of the patient is fairly low. In our clinic for diabetics in the Out-Patient Department of the Rhode Island Hospital we have found it necessary to simplify matters of diet so that they can be mastered easily by the busy housewife. Grams are seldom mentioned in our conversation with patients, as it has been found fairly simple to use household measures whose value in grams we have already determined. For example, we regard four heaping tablespoonfuls of any of the so-called 5 per cent. vegetables as equivalent to 150 grams (or 5 grams of carbohydrate), we order meat and fish in pounds and ounces and milk in tablespoons or cupfuls—but, of course, we keep our case records in grams. Each patient learns the Benedict qualitative sugar test and is given as much theoretical instruction as it seems likely he or she can understand.

A disadvantage under which the needy diabetic must labor is, of course, the inability to afford to buy the special flours and foods, such as the casein flours, the almond and soy bean preparations, which make the lack of starches so much less difficult for the rich diabetic to bear. This has been met, as far as possible, by the use of bran and agar cakes, and in the case of those diabetics who acquire a permanent tolerance of 40 or 50 grams of carbohydrates, by the use of a muffin made of ground rolled oats and bran which was suggested to me several years ago by one of my private patients. The value of this muffin in terms of carbohydrates, fats and proteids is readily calculated, it is easily prepared, and, I may add, it is delicious. The results of treatment in the out-patient clinic have been, on the whole, fairly encouraging. It has proved possible to keep many mild diabetics sugar free for long periods, and in many instances patients who have come to us with fairly marked symptoms have turned out to be of a very mild type and have acquired such tolerance that they have been able to return to a fairly free use of the starches, even white

bread, without the recurrence of the glycosuria.

TREATMENT OF DIABETES IN THE HOSPITAL.

2. The treatment of diabetes as now carried on at the Rhode Island Hospital is open to criticism in that it is by no means unified. The mild diabetic is treated in the Out-Patient Clinic. If his diabetes becomes severe or he develops acidosis he is usually referred to the house for treatment, where he occupies a bed in a medical ward. Often the transfer to the house service means that, due to an incomplete transfer or records with the patient, the house service must begin treatment at a disadvantage. Again, at the termination of his house stay, the mechanism for transfer to the Out-Patient Clinic without a break in the continuity of his treatment is often defective, and too often when he does appear the condition for which he was originally referred to the house has returned. Furthermore, the system at present in use does not give a unified and systematic training to nurses in diabetic work.

In order that our diabetic patients, both in private and hospital practice, may receive the benefit of expert care and nursing, would it not be well to establish, under the supervision of and as a part of our regular medical services in the Rhode Island Hospital, a separate subsidiary service, with as many beds as may be needed, for the treatment of diabetes and metabolism tests, etc.? This plan is carried out in many hospitals throughout the country with very great success and is, in my judgment, equally applicable to the needs of our own hospital and community.

DIABETES IN CHILDHOOD.

3. It is yet too soon to attempt to analyze the results of the newer methods of treatment of diabetes upon the children afflicted with the disease. Time must elapse in which those patients—or at least those of them who survive—may grow up and demonstrate to us how effectively they can be protected from progression of the disease and from intercurrent acidosis. The outlook, however, is much brighter than it was ten years ago. Many

children, after several years of observation, seem to be in no greater danger than they were at the start, and some have shown distinct improvement. An instance of such improvement is shown by one of the patients who came under my observation five years ago, when she was six years old. This little girl was referred to me by a physician under whose treatment she had, during a few weeks, failed to become sugar-free. At this time a prominent pediatricist expressed the opinion that if she could be rendered sugar-free she might live six months. Under routine treatment she did very well and when last heard from, a few months ago, was a fairly normal child for her age, though always considerably under weight. Sugar had recurred in the urine from time to time, but the mother, who was well versed in the method of eliminating it, had always promptly reduced the diet with the desired result. Always in case of children,—and this instance is a good example—the cardinal virtues, intelligence, courage and patience must be shown by the parents or guardians. The child must be trained to be absolutely trustworthy and obedient and to realize that the seductive apple or all-day-sucker offered by a generous schoolmate is for him rank poison. It is probable that many instances of mild diabetes occur in childhood, but that with them a marked tendency to acidosis occurs, which constitutes the chief danger.

DIABETES AND THE EMOTIONS.

4. A subject which has been of considerable interest to me in the treatment of diabetes is the relation of the nervous and mental condition to the carbohydrate tolerance and general progress of the disease. Several instances in which this has been an important factor have come to my attention. One of the most striking was that of a patient, a busy housewife of forty years of age, who had suffered from diabetes for about a year and had twice spent several weeks in the hospital. It appeared to be impossible while this woman was at home for her to acquire a tolerance for ten grams of carbohydrate. Her household cares were many and her daily life was characterized by spurts of energy, in which she would clean the attic or rearrange the furniture or engage in some

other strenuous household duty, and during these periods of increased activity sugar invariably returned to her urine. This patient was finally persuaded to enter the hospital, and by a mistake, all too common at that time, the data concerning her condition did not reach the house service and she was, on entering the ward, put upon the house diet. For two weeks, on this diet, she showed not a trace of sugar! When sugar did appear in the urine it required a lengthy period of fasting and reduced diet to cause her again to acquire a tolerance sufficient to allow her discharge from the hospital. This patient is now, four years later, still alive, and although she has neglected her treatment to a great extent, she has had no recurrence of symptoms as severe as those encountered during her first year of the disease. Another patient, a woman of about thirty-five, whose tolerance for carbohydrates remained at about 30 grams, invariably showed sugar at her menstrual period until she learned to go on a half diet from the first day. The most striking instance of the effect of the emotional state on the diabetes that has come under my observation is that of a young girl of fourteen years, whose diabetes when I first saw her was of about two years duration. She had been under Dr. Joslin's care for a short time and was thoroughly versed in dietetics as applied to her disease. Her tolerance during the few months previous to the time when I first saw her had gradually decreased and she had developed a marked restlessness and irritability. All efforts to assist her to acquire a carbohydrate tolerance of more than 10 grams were unavailing, and she showed a little diacetic acid in the urine on one or two occasions. During my absence, while under the care of Dr. Wing, she developed acute hysteria and was seen in consultation by Dr. Hornor of Boston. As her nervous and mental condition did not improve during the next two weeks, I sent her to Boston and she spent two weeks at the Deaconess Hospital, where she became mentally more calm. A neurologist, Dr. J. J. Thomas, confirmed the diagnosis of hysteria. On her return home her mental condition again became worse and sugar reappeared in her urine. Her condition was indeed pitiable. She sat

moaning all day and showing a condition of practically continuous motor excitation, but slept like a baby all night. Dr. Sanborn, who saw her several times, concurred in the diagnosis of hysteria, but could get no co-operation from her in an attempt at treatment. Her complaints of intense hunger and thirst were almost continuous during the day, her emaciation became extreme and the urinary sugar rose to over 5 per cent. It was urged that she enter Butler Hospital, but her parents were unwilling. For several days she had been found to be unreliable in regard to her diet and had once or twice been able to obtain bread and cereals. The condition appeared hopeless and attempts at further treatment were abandoned. This was on September 28, 1920. On October 13, 1920, the patient walked into my office, and to say that the proverbial feather would have completely upset my equilibrium is putting it mildly. She spoke in a calm quiet voice and informed that she felt almost well, though still somewhat confused when in a crowd, that she was eating everything, including sugar on her cereal, and that she believed her urine to be sugar free. Here is the explanation, obtained from her mother a few days later: When the patient, during the few days before I saw her for the last time, became unreliable as to her diet, she had decided, so she later told her mother, that if the Lord wanted her He could have her, but that she would leave the matter entirely in His hands." At this time she began upon a novena,—a nine days' prayer,—dragging herself with difficulty to the neighboring church each day. On her return from the church on the ninth day, her mother states, the nervousness appeared to have completely left her, she was no longer querulous and complaining, but was quiet, good and "quite like her old self." Hunger and thirst disappeared, she began to take an interest in things, and although still quite emotional at times, she was more normal in every way than she had been for months. Neither the patient nor her parents were willing that the urine should be examined, as it would in the patient's eyes, have been evidence of a lack of faith. This patient continued without the return of her very severe symptoms, living a fairly normal life, although weak and nervous

at times, up to one week ago this morning, when she began to be nauseated and vomited once or twice. Twenty-four hours later she died in diabetic coma.

DIABETES AND PREGNANCY.

5. Text books of obstetrics, even the more recent ones, almost invariably contain the statement that diabetes represents a definite indication for therapeutic abortion. This is by no means true. With proper care there appears to be no real reason why a mild and even a moderately severe diabetic should not pass through a normal pregnancy and delivery without severe acidosis and without the diabetes becoming permanently more severe. Unusual watchfulness is, of course, demanded. The patient should be kept well within the limits of her tolerance and blood sugar tests should be made fairly often. Towards the end of pregnancy fats should be kept particularly low. Tests of the blood fat are of interest, but not essential in controlling this factor. After delivery, as after a surgical operation, the treatment at first should be that of acidosis with threatened coma, which will be discussed later. In our clinic one patient who has been under observation for about three years has recently passed through pregnancy without difficulty. She succeeded in keeping herself sugar free up to delivery, and although sugar appeared after the birth of the child, it has subsequently disappeared and her tolerance is roughly what it was before pregnancy. This patient has never had a tolerance of over 50 grams carbohydrate while under treatment, and it is she who used to show sugar regularly with each menstruation.

DIABETES AND SURGICAL OPERATIONS.

6. The first consideration is, of course, the choice of an anaesthetic. Four methods of anaesthesia. Chloroform need not be discussed, as spinal anaesthesia, gas-oxygen and local anaesthesia. Chloroform need not be discussed, as the objections to the use of ether probably apply to chloroform with even greater force.

Ether is by far the most dangerous of the anaesthetics considered. The effect of the blood-ether mixture which bathes the tissues of the anaesthetized patient is definitely to dissolve fat and raise the blood fat to a degree which greatly

increases the liability to acidosis and coma. Ether should be avoided at all hazards, even in the case of the mild diabetic, and if it is found absolutely necessary to administer it, a minimum quantity should be given.

Spinal anaesthesia, where it is surgically applicable, is much superior to ether. Fitz, in discussing this subject on the basis of operative work done at the Massachusetts General Hospital, concludes that next to ether, spinal anaesthesia should be avoided in diabetes. Cochrane, on the other hand, who is doing a great deal of operating in diabetic cases at the Boston City Hospital and elsewhere, told me recently that he uses spinal anaesthesia as the method of choice in diabetic gangrene of the lower extremities and in other operations on diabetics, and is very well satisfied with his results.

* Gas-oxygen anaesthesia is by far the best general method for use in operations on diabetics. In a given case it is a matter of surgical judgment to decide whether gas-oxygen or local anaesthesia should be used as neither method appears to be intrinsically harmful to the diabetes.

When the operation is not an emergency a course of preparation of the patient should be carried out. This involves a reduction of the blood fat by a fat free or nearly fat free diet and an attempt to bring the carbohydrate tolerance to a high level. Considerable judgment must be shown in the matter of restricting the diet, as a weakened and emaciated patient is a poor risk at best, regardless of what his tolerance and blood fat may be. A recent case of death following caesarian section in a patient of mine has emphasized this point in my mind.

Following an operation the patient should be given fluids to the limit. Fats should be completely avoided, and carbohydrates and proteins, the former up to the point of tolerance, if that is high, or even beyond, should be given. Orange juice, oatmeal gruel and albumen water are appropriate forms in which to administer these substances. If evidence of acidosis develops or if the case is such that there is a grave suspicion that it may develop, the patient should receive at least a liter of fluid every six hours in any way that it can be retained, by mouth or rectum,

subpectorally or intravenously. The use of sodium bicarbonate is not as a rule advisable, as it renders the stomach and rectum less tolerant of large quantities of fluid, while subpectorally it favors the formation of sloughs. It must be admitted, however, that the opinions of the most experienced students of diabetes differ as to the use of alkalis.

RESULTS OF ROUTINE TREATMENT OF DIABETES.

7. While in many instances the treatment of diabetes proves intensely discouraging, due to the natural unwillingness of patients to forego permanently articles of diet without which, they feel life is hardly worth living, and to the inevitable relapses in the disease which follow indiscretions oft repeated. Yet on the whole, very decisive results can be accomplished. In the first place mild diabetes can be permanently prevented in most instances from becoming severe and the patient can with relatively little permanent sacrifice as to diet continue to live out his normal life. Furthermore, dangerous acidosis can be anticipated and prevented. Joslin has recently pointed out that severe acidosis frequently occurs in mild and only moderately severe diabetes and that under the older methods of treatment many of the deaths were due to coma resulting from such acidosis in cases which were really not severe diabetes at all. A recent instance of rather persistent and troublesome acidosis which occurred in a patient whose blood sugar was normal on repeated tests and whose tolerance for carbohydrates was well over 50 grams is an example of this. The patient was suffering from mumps at the time and shortly after the disappearance of all signs of the disease the evidence of acidosis disappeared. In this patient a mild acidosis recurred following caesarian section and she died, but not in coma. Her diabetes was without doubt a contributing cause of her death. The most valuable results, then, of modern treatment of diabetes are the prevention of mild diabetes from becoming severe and the prevention of the occurrence of severe acidosis in mild and moderately severe cases. Severe diabetes is always discouraging, but even in these cases life can be greatly prolonged and often made quite worth living for the patient.

OBSTETRICS—A TWO-MAN JOB.*

By DR. PAUL APPLETON,
Providence, R. I.

No well trained surgeon would consider performing a major operation to-day without the added service of at least two other competent persons,—an anesthetist and an assistant. The American Medical Dictionary gives as a definition for Major Operation,—“A surgical procedure which involves the risk of life.” We commonly recognize this, and go so far as to mentally classify the degree of risk in a given case. If it is a doubtful one, we fortify ourselves by providing facilities and trained and tried help to meet any emergency.

The average obstetrical patient differs from the average surgical one, in that we cannot easily interpret the risk. We cannot readily prophesy whether the obstetrical case will turn out to be a major or a minor one. Certain patients present glaring features which point towards a difficult labor. There is a pre-eclamptic tendency, a small or deformed pelvis, or a poor obstetric history. Others give every evidence during pregnancy of a future normal labor with nothing to fear, but how often does our prophecy come true?

Obstetricians, eminent in their field, have tried for generations to judge the amount of labor a given patient can stand before she shall be exhausted. The estimate cannot be accurately made. Prenatal care and study, with the sphygmomanometer, pelvimeter and painstaking physical examination rule out or recognize organic causes of dystocia. There is yet no red flag which warns of early exhaustion, mental depression and discouragement to be encountered in labor and which, of themselves, often drive us to operative delivery, even in a physically normal woman.

It is equally true, of course, that there are cases which we suspect may come to mechanical delivery, and which, given a fair test of labor, deliver themselves easily. Skilled care, trained observation, even with experience as a background, are not infallible in the prophecy of a patient's reaction to labor. If, then, we do not

know what may occur, is it not better to be prepared for any emergency?

With the advent of aseptic technique, operative obstetrics has had a tremendous impetus, and justly so. Very difficult complications can be righted by careful measures. But those measures must be under proper conditions to be effective, or the results will be uniformly poor. The most skillful hand, if unscrubbed and ungloved, will leave only tragedy in its wake. The most spectacular of deliveries, without all the barriers of asepsis, is only a dangerous risk to the patient. It may permanently damage health, or even result in death.

How much respect would we have for a surgeon who, without an assistant and depending solely on an experienced nurse or well-wishing neighbor for a hap-hazard anesthetic, proceeded to do a laparotomy in a tenement bedroom? What chance would the abused patient have should hemorrhage become uncontrollable? No assistant to do so much as hold a retractor. Yet how true is the picture in obstetrics. A hall-bedroom—a neighbor or perhaps an experienced nurse giving ether—a tired operator who may have been in attendance all night. No other assistance. He is alone,—and the work is *major* operating. The picture is not overdrawn. I dare say it has been true hundreds of times, and in these days of those much abused words, “Surgical skill.”

We cannot do serious, conscientious and safe obstetrics with one pair of trained hands. Even a plumber or an electrician will not undertake a piece of work without a helper. Certainly a surgeon should be condemned for doing so. Why not an obstetrician?

I defy you to show me a more difficult surgical problem or one requiring more deftness, judgment and rapid action than a case of operative obstetrics. It demands a background of training, experience and poise,—a foreground of skill, commonsense and alert patience. No case, even a normal spontaneous delivery, can be satisfactorily conducted, from the standpoint of aseptic technique, single-handed. And aseptic technique alone spells safety.

A multitude of details must be perfectly executed in order to give the safe surroundings of

*Read before the Annual Session of the Rhode Island Medical Society, June 2, 1921.

asepsis. Unaided, it is mechanically impossible to create and maintain it throughout an operation of any magnitude. Obstetrics, above all, demands asepsis. Sooner or later it demands anesthesia. If operative delivery supervenes, the operator needs skilled assistance.

It is my belief that in attendance at every delivery there should be two obstetricians, either of whom is capable of delivery, normal or operative, and equally capable of administering an efficient anesthetic. Just as in surgery, the better the teamwork the better the technique and results, regardless of the procedure which the exigencies of the case indicate. Efficient teamwork cannot be gained without constant training and experience in working together. Each man must know the sequence of events and moves and the assistant must anticipate the desires of the operator.

The duties of an obstetrical assistant are just as well-defined as those of a well trained surgical assistant. He visits the patient when labor is starting, and personally accounts for the numerous details as to the arrangement of the delivery room, preparation of sterile solutions and dry goods and the presence of all the various articles and instruments needed. When labor is active or as soon as an anesthetic is deemed advisable he begins its administration. During delivery he may do one of two things—either take complete charge of the anesthetic, leaving the nurse free to help the operator, or he may actually scrub up as assistant to the operator and still maintain an oversight of the nurse who may be etherizing. During the third stage, if the baby should need resuscitation, if there is perineal repair to be done or if there is any complication of placental delivery, an assistant is invaluable. After the delivery, he takes the responsibility of observing the uterine condition in guarding against hemorrhage. He watches the patient in her anesthetic recovery, and in general makes himself useful in the final attention to the patient before she is left alone with the nurse.

My critics will say that a graduate nurse serves the purpose and that another surgeon is an unnecessary adjunct; that delivery in a hospital solves the problem; that an assistant is a luxury and therefore impractical in the majority

of cases because the patient will not consent to the added expense; and that we are making an elaborate situation out of an essentially normal physiological process.

Where an anesthetic must eventually be given, (and I believe it an unwarranted cruelty not to give an anesthetic) a graduate nurse is not enough assistance. Anesthesia in these cases requires skillful management to be effective. Presuming, however, that the nurse does do the etherizing, there is no one left to help the operator. A friend or neighbor sooner or later always spoils asepsis somewhere. The case always ends with two patients, mother and baby, who may need simultaneous attention.

Deliveries in proper hospital do solve the problem in the majority of cases but not always. At any rate, the increasing demand for hospital confinement by our patients is commendable.

Properly instructed, the public never takes the attitude that an assistant is not needed in a surgical operation,—that he is expensive and unnecessary help. If the difficulties of the surgical case be compared to those of the operative delivery, we are not consistent if we do obstetrics single-handed. True, one may send for help easily and quickly, but not always quickly enough. Time counts when complications develop. A prolapsed cord, a separated placenta, an asphyxiated baby or a postpartum hemorrhage will not always wait for help.

I cannot refrain from referring again to the matter of anesthesia. It is unfair to withhold it even in easy spontaneous deliveries. It is necessary for good results in protracted or complicated labor. I am certain to the point of prejudice that Nitrous Oxid-oxygen is the best and safest obstetrical anesthetic. Its administration requires skill and that alone is enough to demand an assistant to give it.

In conclusion, may I emphasize that, other things being equal, good results and low mortality in obstetrics are directly proportional to the management of the case and the technique of delivery; that conscientious, skillful and aseptic conduct is impossible single-handed; that our patients have a right to enough assistance to minimize the dangers of their labor. If my argument is sound,—and I believe it is,—good obstetrics is a two-man job.

THE SURGERY OF SALIVARY CALCULI.

W. LOUIS CHAPMAN, M. D.

Salivary calculi are of sufficient rarity and surgical interest to be worthy of more than passing interest and discussion. The odontologist recognizes two forms of buccal lithiasis, one known as odontolithiasis or tartar of the teeth, the other as sialolithiasis or calculi in the salivary glands or their ducts. It is to this latter form that I invite attention.

The submaxillary gland or its duct is the most frequent site of stones. In 37 cases Czygan found calculus in Wharton's duct in 22, in Stenson's duct in 5, in the sublingual duct in 4, in the submaxillary gland in 4 and in the parotid gland tissue and Bartholini's duct in one each. In size they vary from a grain of sand to a hen's egg. Very small calculi are probably quite frequent and are passed through the duct without being noticed. Large calculi are very rare indeed. The proportion and frequency of multiple stones is not known. The stone I exhibit is large,—they are usually recognized and removed before they get so large.

They are composed of phosphate and carbonate of calcium in varying proportions. The nucleus of accretion may be organic such as bacterial masses or small fragments of straw or inorganic such as particles of oyster shell which some writers think may enter the duct orifice. Probably infection and focal precipitation is all that is known regarding their etiology and these only in a very general way. The disease is so very rare that it is not particularly important to study the causative factors which are doubtless those of odontolithiasis and embrace all the problems of mouth chemistry and bacteriology. The main thing is to recognize them, to bear in mind that they may be the cause of parotid and submaxillary tumors and to know how to deal with them when found.

In view of the great frequency of calculi in other parts of the body it is remarkable that salivary calculi occur so infrequently. Nowhere do septic processes occur with greater frequency than in the mouth, but it does not appear that advanced dental disease particularly favors the formation of stones. Nor does it appear that previous infectious disease is a cause or in-

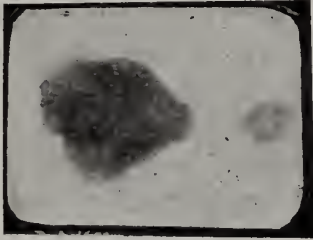
jurious either. Possibly the constant motion of the jaws whereby the tissues are kept active and the glands and their ducts well drained, prevents the retention of any calcareous particles which may be precipitated or promotes the expulsion of any materials which might enter the orifices. This may explain the greater frequency of salivary calculi in men,—then again it may not.

The symptoms vary with the size and location of the stone. If in the parotid gland unilateral mumps may be simulated. If in the sublingual gland or its duct near the caruncle, ranula may be suspected from the retention cyst thereby formed. If infected, pus may be seen extruding from the sublingual caruncle either constantly or intermittently and digital pressure upon the mass increases the pyorrhea. The sublingual tissues may be infiltrated and the breath foul. The papillae may be enlarged and the meatus pouting, a sort of dacryoid cystitis, a condition which greatly facilitates diagnosis and operation. Occasionally the local irritation of a stone in the duct is sufficient to cause focal necrosis and perforation with the spontaneous discharge of the stone into the mouth. Most of them, however, remain in the duct or gland until removed by operation. No trouble at all may be occasioned or the symptoms may be those of adenitis. The general health may be seriously impaired by septic absorption. If the stone is loose in the duct suppuration usually occurs, but when imbedded in the gland and the area is sterile or the infection of low grade there is proliferation of connective tissue which in time makes a fibrous investment as firm as fascia. This, together with the thickening of the gland capsule and the adenitis makes a tumor which varies in its characteristics with its location and the grade of the inflammatory process. The tumor may fluctuate in size from time to time, both with relation to the exacerbations of the inflammatory process and to the time of digestion. If salivary secretion be stimulated by eating or the sight of food the tumor may become tense and extremely painful from the backing up of the secretions behind the stone, a retention cyst being temporarily formed. With further accumulation, however, the duct may become expanded so that the secretion or exudate may escape around the calculus,

the pressure is relieved, the lancinating pains cease and the tumor is reduced in size.

In the case I have to report this phenomenon was observed in the inflamed submaxillary gland, after the stone was removed.

The difficulties and dangers of the surgery of the neck are well known. The involvement of nerves and vessels in the tumor mass makes dissections difficult, but not as much so as in tubercular adenitis. In the case of parotid calculus the most important structures to preserve are the external carotid artery which enters the gland



Radiogram of stones, actual size and in situ. The third calculus in the gland substance is the size of the smaller of these.

and divides into the temporal and internal maxillary arteries at the neck of the mandible, and the facial nerve which divides into its various branches while still within the substance of the gland. Stones of the parotid gland must usually be removed from without, but if small and within the parotid duct they may sometimes be removed intralabially without external disfigurement. A fine probe may be passed through the papilla at the locus of the second upper molar and the duct explored. If in the duct it may be possible to coax the calculus down to the orifice where it may be grasped with mosquito or iris

forceps. Since one lobe of the parotid gland may contain pus or calculi without affection of the others the exploring needle carefully used may be of assistance in locating. In several other papers on mouth surgery I have urged the use of hollow aspirating needles of various sizes with a syringe for suction in the search for pus in phlegmonous infiltrations of the face, neck and jaws. Continued experience has still further convinced me that careful use of hollow exploring needles is of very great use and often reduces to a minimum the sacrifice of tissue, the size of operation, wounds and injury to nerves and blood vessels.

When the operation is to be intraoral on the submaxillary or sublingual glands or ducts the problem is not so easy. If the tumor mass is large the anatomical relations are so changed that it may be very difficult to avoid important vessels and nerves. Yet the intraoral operation should be done whenever possible to avoid disfigurement and salivary fistula which may persist for a long time. The surgery of the submaxillary triangle is of particular difficulty on account of the ramus and angle of the mandible,—the operator is obliged to work up from underneath and the field of operation cannot be as freely exposed as in other triangles. At the root of the tongue are the ranine arteries and veins and the lingual nerves. Below these the hypoglossal nerve, the facial artery and vein and still further down the carotid and pneumogastric. If it is desired to remove the stone only without tissue it may be possible to facilitate operation by forcing it up into the mouth by firm pressure, but even then it is difficult to be sure of the anatomical relations.

Several eye instruments not often used in general surgery may be of great assistance in operating on calculi in either Stenson's or Wharton's ducts. Bowman's probes may be used in dilating the meatus and in exploring: Agnew's or Noyes' canaliculus knives for slitting the meatus or ducts and iris forceps for grasping small stones.

CASE 1. Mr. R., age 35, comes with a large swelling under the tongue which looks like a ranula. The left sublingual caruncle is swollen and pouting and dark greenish pus is seen flow-

ing from its orifice. Sublingual pressure causes the pus to flow more freely. Probing the duct is very painful, but it seemed as if a calculus could be felt. An X-ray film shows a small calculus weighing about three grains to be the cause of his infection.

CASE 2. Mr. W., age 50, comes with a submaxillary tumor which is larger in diameter than a silver half dollar. He has had this tumor for one and one-half years and all remedial measures have failed. He has lost fifteen pounds, his health and strength are failing, he works in misery and he is so weak that he can hardly get around. The tumor is painful on palpation, does not fluctuate in size and is causing difficulty in deglutition. Intraoral examination shows the tumor to proceed well up under the tongue and to contain a large, hard nucleus, the size of which it is impossible to learn on account of the induration of the tissues and the inconvenience to the patient. X-ray films taken at various angles show a constant opacity just above the level of the hyoid bone. Because of the probability of a postoperative salivary fistula it was decided to try and get the stone through the mouth. Operation December 10, '20. Firm pressure from below brought the mass up into the mouth so that it could be cut down upon. So dense was the investment of fibrous tissue that the stone was removed with difficulty by dry dissection. Two calculi were found, the total weight being 3.856 grams. The smaller calculus rests upon the larger upon a facet. No attempt was made to restore either the gland tissue or the duct. He took ether very badly indeed, considerable force was needed to press the tumor up into the mouth and respiration was largely shut off during the operative intervals. He made a good recovery, but the tumor did not go down. X-radiation did not decrease its size. Then began the phenomena described under diagnostic features. The tumor would swell shortly after eating and become very painful until relieved by a burst of saliva and secretion. At one time the swelling was so large and painful that it was thought to contain pus, but the employment of an aspirating needle with suction showed only a few drops of pus from the fortunate tapping of a small focus.

He did not improve further and as a matter of cure, as well as to rule out malignant disease, it was decided to take out the submaxillary gland. This was done February 11, '21, one month after the former operation. He took ether very well indeed. It was possible to demonstrate the line of cleavage between the submaxillary and sublingual glands, the uninjured hypoglossal nerve and the facial artery which was ligated in two places. The gland was very nodular and on palpation seemed to contain several calculi, but dissection showed but one. Sections made for me by Dr. Hamilton, Pathologist of St. Joseph's Hospital, showed an advanced degree of adenitis with intense, small round-celled infiltration of the glandular acini. There is considerable increase in the periglandular fibrous tissue, the capsule is very much thickened together with a marked decrease of the gland tissue which may be due to the continued adenitis rather than to the X-radiation.

The patient made a good recovery, there was no salivary fistula and his health improved rapidly. Four months after the operation the scar was soft and pliable without any induration.

The long continued presence of a calculus in gland substance suggests the possibility of metaplasia or malignant change from local irritation of epithelium. No such case has come under my notice in the rather scanty literature on this subject. Epithelioma of the rodent ulcer type has been observed by Bevan in a case of salivary fistula of the parotid gland. The removal of the calculus, the persistent use of the X-ray and a plastic operation cured the condition which was cutaneous rather than glandular.

Conclusions or rather points of note:

1. Salivary calculus is to be considered in the diagnosis of glandular tumors of the neck and face.
2. Properly taken radiograms usually furnish positive diagnostic proof.
3. Failure to cure by the removal of a single calculus in the gland or duct suggests the presence of multiple calculi.
4. Operation should be intraoral whenever possible.
5. The persistence of a salivary fistula suggests another stone or periodontal disease.

OCULAR TUBERCULOSIS.*

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Ocular tuberculosis has scarcely received the attention its relative frequency of incidence among chronic diseases of the eye merits. All the tissues of the eye, even the lens, may become involved in a tuberculous process, but for the purpose of this short paper, I shall confine my remarks to the more common manifestation of the disease in the anterior segment and in the fundus as I have encountered it in practice.

The most frequent appearance of ocular tuberculosis in my own experience has been as a persistent and intractable sclerokeratitis. The Wasserman reaction has been of undoubted value in verifying the ophthalmologists' diagnosis of specific keratitis, but in dealing with cases of parenchymatous keratitis a negative Wasserman often comes to us with a sense of shock that we are thus to be deprived of the use of our honored and revered potassium iodide and mercury and one feels somewhat at a loss as to just what one is to do for the eye patient who has not syphilis. In these cases I have resorted to the tuberculin skin tests for diagnosis—even in adult, tho' fully aware that a positive tuberculin reaction after ten years of age must not be given too much weight in exclusive diagnosis. I have, nevertheless, found the test of value in indicating the probable etiology of a keratitis which has resisted treatment for months.

Tuberculous sclerokeratitis is hardly distinguishable from the more common interstitial keratitis of luetic origin in the early stage, but in the first the ciliary redness is more accentuated at one point or other on the limbus and the corneal infiltrate is more limited to one part of the cornea. The opacities frequently appear as tongues of grayish infiltrate, apex toward the centre and bearing within them a central core of vascularization. Not infrequently there appears at the corneoscleral line a yellowish, raised nodule resembling a magnified phlyctenule. Differing from our general conception of a tuberculous lesion, being a quiet and not particularly painful affair, most of these cases I have

seen have been attended by a great deal of burning pain, quite out of proportion to the degree of ciliary congestion, which rarely completely encircles the cornea to the same degree as appears at the site of the principal lesion.

Vascularization of the cornea in the tuberculous sclerokeratitis is not very marked and the degree of ultimate visual impairment is less, by reason of the more limited corneal infiltration, than in the syphilitic type.

In addition to the foregoing manifestation of the disease as it effects the cornea, I have seen less frequently the so-called sclerosing keratitis which consists of modified tubercles in the corneal stroma which appear as small, discrete, grayish opacities resembling cold mutton tallow. The inflammatory reaction in this type is much less active and the chief complaint of the patient is not of pain or intolerance of light, but rather of the resultant dimness of vision. The local treatment of tuberculous keratitis is essentially that of any keratitis-cycloplegia, by atropin, hot compresses, dionin, etc. The very chronicity of these cases, however, at times makes these measures difficult of continued use, for I have not infrequently had such patients develop a marked intolerance of atropin, as evidenced by the appearance of a dermatitis of the lids, so severe as to quite overshadow, in the patient's discomfort, the more serious ocular lesion. In such a case, the use of scopolamine, discontinuance of bathings, compresses, and the liberal application of vaseline to the lids have resulted in the disappearance of the local toxic manifestations and still maintained the very desirable cycloplegia which is so essential in the cases.

In the systemic treatment of these cases, of course, the usual tonic and hygienic measures should be carried out, but I have come to feel that in tuberculin therapy we have a very useful modality in these cases. I use a dilution of Old Tuberculin, 2 minims of which represent 1-1000 of a milligram and this is the initial dose which is repeated at ten day intervals for about six weeks, after which the intervals are increased by degrees to three weeks and the dose "*pari passu*" up to three and four minims. The most striking effect from the tuberculin is in the lessening of the inflammatory reaction with coin-

*Read before the Rhode Island Ophthalmological and Otological Society, April 14, 1921.

cident reduction in the scalding discomfort which is so prominent a symptom. The vascularization slowly bleaches out and the corneal infiltrate recedes, tho' it never entirely clears, remaining as a scalloped edge at the limbus. With tuberculin, I feel decidedly less at a loss than heretofore in treating these cases.

In a study of the text books, it is startling to find but the merest mention of tuberculosis of the retina, but that it is more common than such references would indicate is proven by the reports of cases in current literature. Retinal tuberculosis appears as white fluffy areas surrounding the retinal vessels, most frequently the veins, which are the seat of a perivasculitis. The visual disturbance at this stage is so slight that the ophthalmologist is rarely consulted until the vessel wall necroses and there occurs a retinal haemorrhage which usually sends the patient to the oculist. I admit I have never been fortunate enough, or perhaps I should say keen enough, to detect retinal tuberculosis in its incipency. This manifestation of tuberculosis usually occurs in young adults, in whom serological and physical examination throw no positive light upon the cause of the retinal disturbance. Given a case of monocular retinal haemorrhage in a young adult with no cardiorenal disease and a negative Wasserman, I feel we are justified in suspecting a tuberculosis of the retinal vessels. The extravasated blood in these cases show a tendency to absorb much more rapidly than when due to other causes and while the ophthalmoscope will later reveal spots of atrophy, the interference with vision is often surprisingly slight. Such a result occurred in a young man, 25 years of age, whom I saw four days after the appearance of a retinal haemorrhage below the macula of the right eye, and whose vision in that eye four years later with moderate astigmatic correction was 0.9 and whose fundus showed only a glistening streak at the site of the haemorrhage. A result like the foregoing is not to be expected, however, in the massive, recurrent haemorrhage into the vitreous which ultimately becomes transformed into bands of proliferating retinitis.

The recurrent vitreous haemorrhages which occur in young adults are undoubtedly of tuberculous origin. I have under my care for the

past year a young married woman who has had her third vitreous haemorrhage. The vitreous was filled with large floating masses and strands of haemorrhage, which prevented any retinal reflex and obscured all fundus details. Much of the vitreous opacities have absorbed under tuberculin treatment, so that the disc and fundus are now discernible. It is of interest in passing to note that twelve years ago this patient had recurrent attacks of phlyctenular disease which is at least a para-tuberculous affection. The last type of this truly protean disease to which I shall refer in this paper is its invasion of the choroid. That a certain proportion of cases of exudative choroiditis is due to the tubercle bacillus is admitted and my feeling in this regard has been strengthened by the study of a case which I beg leave to report in some detail below.

The pathology consists of a weakening of the vascular walls, leading to the exudation of albuminous fluid into the stroma of the choroid. This gives the ophthalmoscopic picture of a general edematous haze. Slight or more marked elevation of the retina over the infiltrated areas occurs and there may be actual detachment of the retina. Exudative areas appear as grayish spots with blurred or buffy outlines crossed by apparently normal retinal vessels. As the exudate undergoes absorption, the areas become paler and are edged by the characteristic black choroidal pigmentation, finally appearing in the atrophic state with the white sclera shining through. Ophthalmologists are too prone to look upon most choroidal inflammations as due to syphilis and, perhaps realizing that the outcome visually is always grave, have not given this subject the careful diagnostic study it merits. Syphilis can easily be confirmed or ruled out by the Wasserman reaction and in the presence of a negative Wasserman and absence of recognizable foci of other infections a subcutaneous tuberculin test should be done. In exudative choroiditis of tuberculous origin, tuberculin offers some hope of staying further attacks which are so liable to occur. In conclusion I wish to report the case of a young man now 35 years of age, who in 1905, developed exudative choroiditis in both eyes, so extensive as to cause detachment of the retina. He was under the care of Dr. Lucien Howe of Buffalo, who wrote me that at times

his vision was reduced to bare perception of light. Dr. Howe performed repeatedly a double needling Graefe operation, which resulted in the evacuation and absorption of the subretinal exudate, so that in 1911 his vision was 6/12 O.D. and 6/30 O.S. During this period he consulted Utthof of Breslau, who concurred in the diagnosis of exudative choroiditis. In 1915 I saw him in an active attack of sclerokeratitis and for the last five years he has had almost annually an attack of scleritis, keratitis or iritis. In May, 1919, he had a massive vitreous haemorrhage in the left eye and since then he has been dependent upon his right eye. In August, 1920, the sight again becoming the site of a sclerokeratitis, a Wasserman was done, though this had been done several years ago with negative result, as was this one. His attending physician, a most competent internist, reported a negative physical examination. Dermal tests for the proteins of the ordinary articles of diet gave no reaction and finally a subcutaneous tuberculin test was done. The local reaction was so decided and conclusive that tuberculin injections were begun November 2nd. After the third injection, there was a decided subjective improvement in the vision of the left eye which has continued until it is now objectively O.I. Coincident with this, there was a noticeable quieting of the sclerokeratitis of the right eye, the ciliary injection subsided and by the middle of December cycloplegia could be dispensed with. At this time, the ophthalmoscope showed in the right eye a patch of choroiditis the size of a pea, and some residual corneal infiltration and in the left scattered areas of atrophic choroiditis, but no vitreous opacities. In reviewing the previous history of this case of attacks of exudative choroiditis, recurrent vitreous haemorrhages and attacks of sclerokeratitis, it seems that one is justified in deducing that all these conditions were varied manifestations of the same etiology. The subcutaneous tuberculin test and the behavior of the eye under tuberculin treatment strongly suggest tuberculosis as that etiological factor.

ADDRESS*

By MR. GEORGE W. GARDINER,
VICE-PRESIDENT OF THE UNION TRUST COMPANY.

You know we have been through war. We have had an artificial rather than a natural

*Read before the Rhode Island Medical Society, March 30, 1921.

means for working and carrying out our ideas, and have done everything possible to blame the other fellow. I am going to talk now on some commercial phases of business that perhaps are a mystery to you. I am not going into detail about commerce, but I am going to talk to you in a simple way and I am going to use some figures to illustrate it more fully.

It is a well established principle in commerce in these days, that there must always be an abundant supply ahead of the demand. Even in prosperous times, the farmer and manufacturer produces his supply at a certain cost and then his main object is to sell his product at a profit, sometime in the future. If instead of making a profit on his product he loses, the loss may be a heavy one and when everyone guesses wrong, as to what the market price will be, it produces a crisis. That's what is happening to-day. We find to-day that the demand is taking care of the supply. Last April our silk trouble broke and then they all started. We had the woolen trouble, the cotton trouble, the trouble in the machinery business, until every business was involved, and then to cap the climax, the public went on a buying strike. The real cause of all this trouble is that each generation goes on making the same mistake that the generation before us has made. The panic of 1837 was absolutely land speculation, 1883 speculation in railroads, 1920 speculation in industries.

The different critical periods of business are as follows:

1. Quiescence.¹ This is the period when everything is quiet.
2. Improvement. Beginning to have improvement.
3. Confidential. We have greater confidence.
4. Prosperous. Meeting with prosperity, we forget the past.
5. Excitement. When everybody loses.
6. Forbearing.
7. Convulsive.
8. Pressing.
9. Stagnation. Business is dull. No earnings are made.
10. Distress. Then the next period is a repetition of the first.
11. Quiescence.

We will learn something from this instead of letting the whole thing go down to the bottom. After the critical period, came the beneficiary period and since that time we have so far recovered, that we now talk about the matter and think of the narrow escape we had. The national situation to-day is one whereby we owe in round

figures \$25,000,000,000. The biggest debt we have ever had. But do not forget this; that we owe all but \$5,000,000,000 to ourselves. You can hardly say that of any other nation except Germany. In the liberty loan campaigns, it was not put in because the wealth of the country was \$250,000,000,000, and we owed a mortgage of one-tenth of our wealth which is so comparatively small in proportion with our wealth. In the civil war days, the biggest debt we had was \$2,650,000,000. The debt we had with the other nations was \$26,000,000,000. So you see the proportion was the same. Forty-two per cent. was theirs and the prospects are that we shall get out of this, but in a reasonable length of time. That is, of course, an obligation on the part of the government and also of the approximate interest of \$1,000,000. The only way we can get it is by taxation. Taxes are going to go up within the next few years. In regard to issuance of Federal Reserve Notes, in 1914 we had a circulation in this country \$3,400,000,000. About all the money you have now is either reserve bank checks or Federal Reserve Notes. This is what it says on the back of a Federal Reserve Note: "This note is receivable for all taxes and is redeemable in gold on demand at the Treasury Department in the city of Washington, District of Columbia." We bought \$2,600,000,000 worth of Federal Reserve Notes during the war, but then we did not stop buying these notes after the war had ended. In 1919, we started again, until up to December, 1920, we had out \$3,400,000,000, making a total of about \$6,000,000,000. In 1865, we had out \$20.65 for every man, woman, and child. From that time to 1897, that had hardly increased. At times this got as low as \$15 and after thirty-two years it had increased to only \$22. Our money gradually increased in value in 1897 up to 1914. But then the war started and everything began to go up. Then we began to increase the supply of gold in the world. Now it does not make any difference whether your money is gold or silver. We increased 100% in the production of gold in South America. Our mines were opened so that in 1914, you had \$35 per capita. When we went into war, everything kept increasing and in 1920, you had \$60 per capita. What is the solution of getting rid of Federal Reserve Notes? When

we get rid of these our prices will lower. Notice this set of figures:

	1897	1914	1920
Federal Reserve Notes.....	\$22	\$24	\$60
Pork Chops .....	.11	.22	.42

So you see our object is to reduce the Federal Reserve Notes, and by having less money in the country, normal conditions will return. Now beginning 1921, we seem to have gotten wise to ourselves for the first time since war time. We have reduced our number of Federal Reserve Notes amounting to \$60,000,000. Then we steadily reduced them. The week ending January 8, we reduced \$110,000,000. The week ending January 15, we reduced \$174,000,000. The week ending January 22, we reduced \$192,000,000. The week ending January 29, we reduced \$221,000,000.

I spoke to you in regard to taxes. It is necessary to furnish the government with necessary funds. Everybody has a proportion to pay and very few people are independent of it.

The income tax collected in this country in the year 1918 was \$2,100,000,000. Then the wealthy man had gotten wise and the income tax in 1919 amounted to only \$900,000,000. The reason for this is that he began to invest his money in tax exempt securities and I know a whole lot of you right now are wondering what kind of securities they are. There have been issued in this country in the last five years, a total of \$14,000,000,000 of these securities, and the ones who buy these have no income tax whatever to pay. Ordinary persons like us have to pay. A man in order to get the same amount of income on a taxable security that he would out of a non-taxable security, or a bond that pays 5½%, should get money by investing in a municipal tax without paying any tax whatever, but 16½% in a bond. Let me explain. One man takes his \$5,000,000. He invests it in a tax exemption bond of 5½%. He gets an income of \$270,000 and that is exempt from taxation. The other man takes \$5,000,000 and invests in a manufacturing stock. He makes a profit of 10%. Therefore, he gets an income from his business of \$500,000. Along comes the income tax collector. He gets \$197,000, which is also subject to local taxation and besides takes a risk, because he may lose in his business enterprise.

Let me call your attention to the tariff law which then arose. Last year we imported into this country merchandise worth \$5,250,000,000. It costs us \$15,000,000 a day and you will say that the tariff bill is a very poor prospect, which means that you have now a tariff of 63/10%. The rate we get on imports is 22%, so you see how easy it is to send merchandise into this country at that rate of tariff. That makes me speak of a subject actually true to-day. There are 70,000,000 people in the United States. There are as many in Germany. Through our dilly-dallying and making peace terms, Germany has taken the opportune time to take up her industries until she is a great danger to us. Germany has sent her men out all over the world. Salesmen were sent to Great Britain, and there is no doubt in my mind that Germany has salesmen in this country transacting business for her. German industry has collected itself. To-day she is doing business with countries all over the world. Our trade with Germany last year amounted to \$400,000,000. The biggest figure before the war was \$5,321,000,000. We sold her \$11,000,000 of cotton and \$17,000,000 of bacon. Germany sold Great Britain \$9,000,000 of dyes. Germany sells to the people of Great Britain at prices that producers and manufacturers cannot meet. Dye manufacturers in England sold dye at four shillings per pound. Germany sold dyes in five and six hundred shades at one shilling per pound. These products that Germany sells at such a cheap price, England cannot manufacture for twice that sum. Regarding the Japan trade of Indigo, Germany recently bought some land in Japan and upon exploring it found it was rich with indigo. Germany sold this indigo to China at such a cheap price that it caused consternation among the merchants in Japan. The local works in Germany employ 250,000. One of the banks in Germany has declared a dividend of 50%. Germany is in a movement of industry to-day, paying from 4 cents to 7 cents an hour for labor in the woolen industry, while we are paying from 30 cents to 80 cents per hour for the same labor. Do not misunderstand me, though, for she takes good care of her employees. She provides homes for her employees and gives them bonuses when she sees that they cannot live on the wages they receive.

A spinner in a woolen mill that is twenty-one years old receives from \$2.55 to \$3.75 per week. Others whose age ranges from 15 to 21 years do not get as much. I call your attention to this fact, because the present wages in this country are 220% higher of what they were in 1914. In Great Britain 208½% and France 117%. In Germany the rate of wages is 59% of what it was in 1914. Germany is buying less. Every German ship-building yard is making ships and if she can buy her raw materials where the exchange is more nearly par, she will be absolutely independent. When Germany tells the allies that she cannot pay, we will say that she has got to. I refer you to this, because I feel that some of you do not know of these facts. We have been accused of buying extravagantly, but I think those added together do not amount to much. Compare it with this for instance. We Americans have been trying to get 8% interest on notes, which is only an added expense on the Government. I am going to prophesy this afternoon, that the situation we are in now, we are going to get out of sometime, maybe to-night or to-morrow. I have every reason to believe that we have passed over the critical period and I believe that by January, 1922, conditions will be normal again. We must get back to the old original proposition of saving. Look over the country, see the immense buildings, see the railroads, see the mills, then bear in mind they were made through the savings of generations before us. We have a country, wealth, and by hard labor and saving, we will get out of the rut.

IN HONOR OF MME. CURIE.

In the June issue of the *Medical Review of Reviews* was a special radium number dedicated to Mme. Curie. The issue consisted exclusively of articles on radium and its uses, written by the most prominent radiologists in the United States and Canada.

Copies will be sent complimentary to every physician interested in the uses of radium and any readers of this item who desire that issue may have it by asking for it from the Medical Review of Reviews, 51 East 59th Street, New York.

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EDITORIALS

"THREE IN ONE."

Owing to the delay in publication caused by the printers' strike, it has been thought best to combine the July, August and September numbers of the JOURNAL in one issue; if indeed this could be done without inconvenient bulkiness or too great heaviness in reading matter.

Obviously, affairs of the various medical societies will be missed by most of our readers who are naturally interested in their various

activities, but as there are no meetings during the summer months, this must be endured.

We have never before been called upon to face conditions of this character and venture the hope that it may not occur again. We are offering the present triplicate issue, therefore, and trust that it may not be altogether without interest.

EFFICIENCY AND GROUPED SPECIALISTS.

To one of the most famous clinics in the United States a doctor, himself a well-trained

specialist, recently took his elderly father-in-law for diagnosis and treatment. The old gentleman, who had been out of health for some time, was received by a physician who took his history and gave him a series of appointments to present himself to various assistants at certain hours for special examinations, urinalysis, blood analyses of various sorts, physical and X-ray examinations and the like. These occupied several days. In the meantime the patient became rapidly worse and, furthermore, considerably alarmed. Yet as the diagnostic problem was still unsolved no suggestions for treatment were advanced and moreover no word of encouragement was vouchsafed him to dispel the clouds of fear which oppressed him. At last the son-in-law was forced to insist that something definite be done ere the old man become fatally ill—and in time both diagnosis and treatment were decided upon—each, in fact, of rather a simple nature. How the patient must have longed for his “good old family doctor,” who in his big-hearted, even if superficial and inefficient, manner would have calmed all fears, and putting the patient at rest in mind and body would have carried out the treatment perhaps as effectively, if less accurately.

In this day of specialists, when a number of men are needed, each to examine a different part of a man's body, care must be taken that the *toute ensemble*, the man himself, be not lost sight of. The general practitioner, the family doctor, who studies not only his patient's person, but also his personality, must be at the helm, the most important link in the chain, else amid the multiplicity of specialists, each searching his own field for pathological minutiae, the patient himself may be forgotten, and the result of the ardent striving for efficiency be a collection of data, interesting perhaps to the doctors as investigators, but to the patient expensive and useless—the acme of inefficiency.

MEDICAL PROPAGANDA.

Propaganda is a word that has been used so much and that had such undesirable connotation during the war that it is risky to use it. It is, however, so descriptive that it is a valuable word. In this sense it means the necessary procedure that the medical profession should use

to bring before the people of the country the true facts that are often distorted.

The following are just a few samples. The manufacturers of patent medicines and the adherents of certain cults are always berating the “Medical Trust.” If the American Medical Association is meant, this organization bears no resemblance to the business organizations known as trusts. Last March the papers were full of the wonderful results achieved by the chiropractic treatment of Miriam Rubin, when the facts were very far from the published story. Recently the Missouri legislature deliberately lowered the existing standards of medical licensure by substituting the words, “legally chartered,” for the word, “reputable,” in relation to medical schools. This would open the door to the few schools that are really nothing but diploma mills, for the chartering of an institution has nothing to do with its educational requirements, but merely means the payment of a fee to the state for the issuance of a charter. Finally the absurd exaggerations of the anti-vaccinationist and the anti-vivisectionist are fed to a gullible public.

It has been suggested that one means to counteract the apparent desire of the press to publish material that casts reflection on the medical profession would be the publication of a popular medical journal, but this would not reach the rank and file of the people. Better by far if each individual physician would act as an information bureau to his own clientele and by keeping his own knowledge up to date distribute the proper information to the general public.

CIGARETTES, THE LITTLE WHITE SLAVES.

AN ARGUMENT.

Little did Sir Walter Raleigh think, when he carried samples of tobacco from America in 1585, and introduced smoking in England, that the habit would be so popular to-day. A story is told of Raleigh, while he was smoking at his home, that a servant was waiting on him and saw smoke issuing from his nose, and thinking his master was on fire, threw a mug of beer in his face and ran away, crying for help lest his master should burn up. So, we learn that tobacco is a product of America; it was here

when this continent was discovered, and we have spread its use to every known land. It is a well known fact that everyone has some hobby or habit—If it is a good one, no one can say anything against it, but if it causes a nuisance, or an injury to the body or the rights of others, then we hear protests.

In regard to cigarettes, most everyone knows they are made from tobacco, specially treated, scented or not, and rolled, being held together with a white paper binder and labelled attractively.

We will look at its defense and note all the good qualities and benefits gained by their use. Such a subject as the one in question should be discussed only by broad and fair-minded people. There are at all times people who will go with the crowd, be it good or bad. It is always easier to flow with the stream than sail against it. Many may say unkind words after reading this article, but perhaps a seed will be planted which will fruit in due time. Those who use tobacco in a moderate form claim stimulation of thought, quieting of nerves, and feel a sense of pleasure that is hard to gain otherwise. Be that as it may, let us look at the young child of five or six years with a cigarette in his mouth puffing away and spitting on the street, as he walks, like the big fellows. But let's follow the child and learn the benefits he receives, and we note year in and year out that he does not grow mentally or physically, as other boys who do not use the weed. How does he get along at school? Is he regular in attendance? NO. Is his deportment good? NO. Is his work in the 3 R's as it should be? Again: "NO" is the reply. Looking at him physically, he is young in years, but old in appearance, with diminutive size and poor development. The nervous system shows poisoning—fine tremors and stained hands taking the place of the normal steady hands. Confused ideas all show the destruction of nerve-cells. The respiratory passages are all affected; then with the burning and drying of the mucous membrane and the lowered resistance, disease is more often able to gain entrance into the system. The picture above roughly and briefly drawn, showing some injury to our youth by the "Little White Slaves," could be enlarged, showing many other injuries from the tobacco habit.

In conclusion:

Young people who use cigarettes always show symptoms of poisoning, such as pallor, dullness in activity, inaccuracy in reasoning, and the capacity to carry out fine work is lacking. Tobacco is more or less a dangerous narcotic to the senses and higher brain activities, and no person can be in complete possession of his faculties and power of control, and exercise the highest efficiency possible who uses tobacco. Such men as Thomas A. Edison, Dr. Wiley, Dr. Winfield Hall, Hudson Maxim, Hon. Benj. Lindsay and others are very much opposed to the tobacco intemperance. Many of the big business houses will not employ users of tobacco. The State of Utah will not permit the advertising of cigarettes. This all looks as if there were a partial awakening to the injury being done to the "Boys of To-day" who will be the "Men of To-morrow." One couplet the writer learned when a small boy.

It was like this:

"Tobacco is a filthy weed,

It was the devil who sowed the seed.

It stains your hands and stains your clothes,
And makes the smoke start out of your nose."

THE NEW HUMORAL PATHOLOGY.

For two generations or more it has been fashionable to speak, with amused condescension, of the ancient humoral pathology. Our forefathers, so we say, were for centuries sailing a medical sea where phlegm and blood and yellow bile and black bile befogged the eyes, obstructing the progress of medical science and the efficacy of medical art. We were right, of course, in our condemnation of the old pathology, for it was of the stuff that dreams are made, and had no more substance than the Oriental imagination which gave it birth. But what of the new humoral pathology? Is much of it any more respectable in logic or in fact? Hippocrates, Galen and the rest declared that health and disease were owing to the proper admixture of their four humors: too much or too little of this or that, and the normal harmony of the body was disturbed or destroyed. So influential, indeed, was this old pathology that even to-day its words are in our mouths and more perhaps than

we admit or suspect it determines not a little of our practice.

Our new pathology, too, deals with humors, very subtle and very elusive, with different names, but none the less humors. We call them hormones and talk learnedly about them as if our knowledge were commensurate with our speech. On the basis of a little demonstrable fact we have erected a towering superstructure of speculation, the very size of which conceals its hollowness. Some things we do know, to be sure, about the thyroid, the adrenals, the testicles and the ovaries, but what a frail foundation is this for our high imaginings! If one is disposed to doubt the truth of this statement let him but read some of the recent books about the endocrines and the periodical articles on the endocrinopathies. There he will find as many fallacies in reasoning and defects of observation as ever filled a tome of Galen. And with what result? Why this,—that too often our therapeutics are motivated not by truth but by falsehood and error.

Take but one example, the so-called "adrenal insufficiency." Much has been written about it, and yet as Prof. G. N. Stewart, a competent and critical authority, remarks, "On the whole, then, it must be granted that hitherto the attempts made to evoke in animals a well marked syndrome characteristic of adrenal deficiency, have been singularly disappointing. The contrast is great when we leave this desert, where the physiologists and experimental pathologists have wandered, striking many stones but finding few springs, and pass into the exuberant land of clinical endocrinology, flowing with blandest milk and honey almost suspiciously sweet." These are hard sayings for the manufacturing chemists who ply us each week with pamphlets and postal cards importuning us to cure everyone with glandular extracts, whether it be an epileptic child, a neurotic woman, or an impotent man.

What is true of "adrenal insufficiency" is true of many other so-called glandular disorders. The French with true Gallic spirit are the worst offenders here, for their pretty diagrams of supposed glandular inter-relationships are so irritating when you know that they represent—just the savant's fancy. It would seem then that for

some time to come we may very well resign ourselves to be modest in our discussions about the endocrines, lest perchance we may give some future medical historian an opportunity to warn his readers against indulging in our special kind of speculative medicine, endocrinology.

SOCIETY MEETINGS

24TH ANNUAL MEETING OF THE MEDICAL LIBRARY ASSOCIATION.

The 24th Annual Meeting of the Medical Library Association, whose membership includes all of the larger medical libraries of the country, and a large number of individual members, consisting of those interested in furthering medical library work, was held in Boston, June 6, 7, 8, 1921. The business meetings of the Association were held in the Boston Medical Library. In addition to the address of the President the program contained the report of a committee on Standard Classification, and the system used in the Boston Medical Library, and this as explained by the Chairman, Mr. James F. Ballard, was adopted, as being the most practical solution for meeting the perplexing problems of classification. This was followed by a discussion of Reference Aids, which was opened by Mrs. Grace W. Myers, of the Treadwell Library of the Massachusetts General Hospital. An evening meeting, which was largely attended, was addressed by the President, Dr. John W. Farlow, of the Boston Medical Library. This was followed by an interesting paper, illustrated by lantern slides, by George S. Huntington, of New York city, entitled "Some historical facts concerning the catoptron of Johannes Remmelinus, and the superimposed anatomical plate during the early part of the 17th century." Following this Dr. Malcolm Storer, of Boston, read a paper entitled "Interesting medical medals."

In addition to the regular program visits were made to the various libraries in Boston. In each case the members of the Association were shown over the buildings and the various points of interest were explained. Visits were made to the Harvard Medical School Library, Boston Public Library, Harvard College Library, Treadwell Library and the Boston Athenaeum Library. Of

particular interest was an exhibit of rare medical items from the library of Dr. Edward C. Streeter, of Boston, spread in the exhibition room of the Boston Public Library. The exhibit was specifically epidemiological, the essential literature on fevers from Hippocrates to Lancisi, with a few sections such as Plague, Syphilis, venesection superadded.

The permanent headquarters of the Medical Library Association are in the Medical and Chirurgical Faculty Building, at 1211 Cathedral Street, Baltimore, Maryland.

WOONSOCKET DISTRICT MEDICAL SOCIETY.

The Woonsocket District Medical Society met on Thursday, July 7, at 4:30 p. m., at the Woonsocket Hospital, as guests of the matron, Miss Lucy Ayers.

Mr. Robert M. Curtis of Boston read a paper on "Artificial Feeding of Infants."

T. F. BAXTER, M. D., *Secretary*.

HOSPITALS

PROVIDENCE CITY HOSPITAL.

Dr. Henry S. Joyce finished a three months' service on April first and entered on service at the Rhode Island Hospital at that time.

Dr. Deering G. Smith became a house-officer on April first. Dr. Arthur R. Newsam became a house-officer on April thirteenth. Dr. Lester J. Gilroy became a house-officer on April fifteenth.

The regular monthly meeting of the Staff Association of the Providence City Hospital was held at the City Hospital on the evening of April 20. The out-patient services, Pediatric, Nose and Throat and Dental Departments reported upon and discussed the work done during 1920.

Dr. Deering G. Smith finished a three months' service on July first and is to open an office in Nashua, N. H.

On July first Dr. Earl R. White began a three months' service.

Dr. Edward S. Cameron has been appointed visiting anaesthetist to the hospital.

Dr. Frank J. McCabe has been appointed visiting surgeon to the out-patient nose and throat department.

The number of in-patients has been exceptionally small and it is worthy of note that for the first time in twelve years the diphtheria ward has been closed. At present writing there are no diphtheria patients and only five sick with scarlet fever.

ST. JOSEPH'S HOSPITAL.

Regular meetings of Staff were held Fridays, June 10, and July 8, 1921, at 9 a. m., at Out-Patient Building.

GEORGE F. JOHNSON, *Secretary*.

MISCELLANEOUS

FROM THE SIDE LINES.

I always had a good deal of respect for our family doctor, barring a few bad moments, when I was vaccinated and sundry other times when the flavor of his medicine was not to my liking, and as I grew older, I often thought I would like to be a doctor myself. In those days, and I'll admit it was some time ago, the doctor was an important factor in every family, and with the judge and minister, was of importance in town affairs. He seemed to have an easy time of it; was always well dressed and never hurried. Moreover he always had money or what I learned afterwards—good credit, which to most people, amounts to the same thing. This impression was carried to my maturer years and I envied the doctor of to-day, and regretted more and more that I had not followed my first intention, instead of entering business. They all seemed to be prosperous, they looked contented and they drove an automobile, a dignity to which I aspired, but had not reached.

I never knew a doctor intimately or claimed one as a personal friend till misfortune came to me and I fell sick. Just what was the matter, it seemed hard to decide, but I was all in, and I went the rounds of the profession. I had my blood tested, as well as several other body fluids, they jabbed me with needles solid and hollow, they put all sorts of contraptions on my arms and over my heart, I was X-rayed and steamed, starved and fed, all of which doubtless were good in their place, but it did more good to the doctor than to me, and I finally decided that I would find some good man, get his advice, and

stick to him and not go gallivanting all over the country, and this was where I was wise and first came to know Doctor A. He was a good all-round man, not a splurge artist and was not at the head of any hospital, and you never saw his name or picture in the papers as attending the honorable so and so, but he was on the job and his advice was honest and given after due consideration of all the facts in the case.

His prescription was Rest, with a capital R, and so business and I dissolved company, and for a year I was without a job, and because I had nothing else to do and because I liked Dr. A. I got in the habit of trailing him and in some ways tried to make myself useful to him, and then I began to feel as if I had not really made a mistake in failing to enter the profession. Things were in reality not what they seemed to me as a layman on the side. I rode with him in his automobile and I learned that it was bought on installments, and because his patients were slow pay he was constantly harassed by a collector. I found that his leisure time was a myth, no matter what his plans for enjoyment, some boob was ready to jump in and demand his service. I was with him when he left the dinner table, when he was called from the theatre and several times I rode with him at night, and more often than not, this service was unnecessary. I went with him day after day while he fought a fever in a young girl and when, after days of anxiety and nights of watching, she recovered, I enjoyed hearing the praise and thanks given him by her grateful parents, and said to myself, here is reward enough, and it was, and all the reward he got, and very few days later, when a youngster in the family stubbed his toe, and Dr. A. was somewhat delayed in getting there, he found another doctor installed, and the anxious mother told him she was sorry, but her family physician must be more prompt and she felt obliged to change. When I went to collect the bill for the doctor, all I got was a tongue lashing from an irate woman who did not see how Dr. A. could, with a clear conscience, charge her for all those visits to her daughter.

I found that he was hemmed in by a lot of red tape, he could not relieve a belly-ache with an anodyne without catering to Uncle Sam, he could not prescribe a stimulant without au-

thority, he was fined if he did not report certain cases to the authorities, he had to pay a tax on this and that and write his prescriptions in duplicate, count the morphine pills in his office and make a return to the Internal Bureau. He had to sign death and accident certificates at prices decided upon by some one else. His accident cases were sent to the hospital and they got the pay for them, and he was a sort of animated sign board directing patients where to go for treatment.

One night, a man called him out of bed to ask him where he could find a specialist in piles, and once a fellow bothered him for a half hour about his wife who was to be confined and finally said, "Well if the mid-wife had any trouble she would call on him." After a while it began to seep into me that practicing medicine was no cinch, and I was perhaps well off, but still I thought pretty well of the kind of work he had. It was genteel at least, and not very tiring to sit in your office and after listening to a history of sickness, to advise the patient, write a prescription, and pocket a fee. It wasn't as if you had to get all hot and dirty shoveling sugar or flour as I had done and was sometimes mistaken for a clerk instead of the proprietor and then I got a jolt.

I had to go West and my friend gave me a note of introduction to his brother who was in the profession all that Dr. A. was not. He was professor of something in a college, surgeon to this and that hospital, chairman of several commissions and once had been called to Washington to see a president or senator or some one, and had his picture in all the papers. Well I saw him, and I must say I was treated fine, he was glad to see me and wanted to know all about his brother and his family, he was so darned busy he hadn't time for his own family, let alone his brother's, and he did not know whether there were six or ten children, or whether they were boys or girls or twins. He made me stay in his office with him and between patients he would fill me full of questions. I had some conscience left, and I didn't think it quite right to stay and listen to all their secrets, being a layman, but he said it was all right, there wasn't much the matter with any of them and moreover, he would tell them that I was an old friend of his and a

professor in a college somewhere East. This was all right, but annoying, for he would talk some scientific lingo, and then say, "Don't you think so, Dr.," and I didn't know whether to say yes or no. He was right, there wasn't much the matter with any of them, except old age or high living and booze, though they had symptoms enough to call all the diseases in the dictionary, and the advice he gave them was always about the same or similar. When there came one that was sick, a woman carried in by two men, paralyzed and had been for twenty years. She had an idea she was going to get cured, but I knew better and the doctor tried to let her down easy and was real gentle with her. He said she had something or other in the horns of the cord. I could not catch the word and then he asked me, "Don't you think so, Dr.?" I had gotten to the point of saying yes, so I said yes and tried to look intelligent, and then the boob says, "What would you suggest, Dr. as a treatment?" Now I never knew much about paralysis, the only case I remembered was a cow I had, and then the Vet. injected some medicated air into the udder and she got well, but I did not know how the patient would take it if I suggested such a thing, so I said, "Well, I think you better have her come back again in a week." The doctor said I had the makings of a good fashionable physician. He gave me a good dinner and something to drink that I hadn't smelt in a long time, but I had got enough.

If I was a doctor, I would rather be a grocer.

EYE SIGHT CONSERVATION COUNCIL.

A nation-wide save-your-sight campaign is to be conducted by the recently organized EYE SIGHT CONSERVATION COUNCIL to acquaint the public with the importance of eye care and to urge the universal eye examinations of school children, workers in industry and clerks in stores and offices. Special literature will be sent to teachers, employers and those especially interested in the advancement of efficiency and welfare in industry. Charts and posters are to be placed in school rooms and factories visualizing eye care, depicting the advantages of correcting ocular defects, and warning against eye strain

and its attending evils. The EYE SIGHT CONSERVATION COUNCIL is a membership organization. The Directors and Councillors are professional men representing various organizations devoted to health, welfare, education, science and industrial betterment.

The following are the officers:

President—L. W. Wallace, New York, N. Y., who is President of the American Society of Industrial Engineers and recently elected an officer in the newly formed Federated American Engineering Societies of which Herbert Hoover is President. Vice-President—Cassius D. Westcott, M. D., Chicago, Ill., Chairman of Committee on Conservation of Vision of the Council of Health and Public Instruction of the American Medical Association. The other directors are: R. C. Augustine, Decatur, Ill., President of the American Optometric Association. Bailey B. Burritt, New York City, General Director New York Association for Improving the Condition of the Poor. R. M. Little, New York City, Director of the Safety Institute of America, member of the Executive Committee of the National Safety Council.

The personnel of the Board of Councillors is to be carefully selected and so far but a few have been chosen, these being: Dr. Thomas D. Wood, Teachers' College, Columbia University. Prominent in educational circles and chairman of the Joint Committee on Health Problems in Education of the National Council of the National Educational Association and the A. M. A.

Dr. Frederick R. Green, Chicago, Ill., Secretary of the Council on Health and Public Instruction of the American Medical Association. W. S. Rankin, M. D., Raleigh, N. C., State Health Officer of North Carolina; member Executive Committee American Public Health Association. Arthur L. Day, Ph.D. and Sc.D., Director in charge of Geophysical Laboratories, Carnegie Institute, Washington, D. C. Allen McLoughlin, M. D., Assistant Surgeon-General, United States Public Health Service, Washington, D. C. Guy A. Henry, Times Building, New York City, is the General Director.

The financing has been handled in a manner quite unusual. The optical industry and trade

were approached directly on the principle that a movement of this nature should first of all be supported by an industry which will ultimately be benefited. The subscribing and underwriting of a sum was realized sufficient to assure success to the undertaking. While at this stage the financing is by optical interests generally, support is not restricted to such interests, and all activities of the organization will, at all times, be conducted free from the influence of commercial interests. The form of government safeguards against the possibility of any interest gaining ascendancy and assures the conduction of all activities along broad humanitarian lines strictly in accordance with the following:

OBJECTS.

To promote the general conservation and betterment of vision, by: Arousing public interest to a proper appreciation of the importance of eye hygiene and the care of the eyes, especially insofar as it pertains to defective vision and protection in hazardous occupations. Disseminating knowledge regarding the optics of the eye, the prevalence of and the need of correcting visual errors, and of suitable protection against the special hazards and eye strain encountered in various industrial occupations. Circulating information on the proper lighting of homes, schools, factories, office and all private and public buildings. Striving to bring about the universal eye examinations of industrial workers and of school children, both rural and urban, also, urging the importance of periodical eye examinations for everyone. Developing or improving optical aids for the alleviation of visual troubles. Compiling reliable data, publishing and circulating literature pertaining to eye care. Enlisting the aid of and rendering service to State and Federal Governments and all departments of health and education. Coöperating with all existing agencies concerned in any degree with the movement for better vision, and striving to coördinate their efforts. To act in all of these enterprises without bias or prejudice, actuated pre-eminently by a desire to further the public welfare and to increase the efficiency, comfort and happiness of humanity. The work of this organization will be of particular interest to the ophthalmologists of the country and their assistance and coöperation is desired.

ANNOUNCEMENT.

The proposed Public Health Institute which the Service contemplated holding in Washington, D. C., during the fall of 1921, has been indefinitely postponed. This action has been decided upon after several conferences between officers of the Service and officers of the American Public Health Association.

The Fiftieth Annual Meeting of the American Public Health Association is to be held in New York city, November 14-18, 1921. Several other activities are planned by the Association in connection with their semi-centennial meeting in November, 1921, and it was at the request of the American Public Health Association that the Service institute for next fall was abandoned.

The Service hopes that it will be possible to arrange to hold a similar institute in Washington during the spring or fall of 1922.

By direction of the Surgeon General.

Respectfully,

C. C. PIERCE,

Assistant Surgeon General.

CASE REPORT

REPORT OF A CASE OF INFLUENZA MENINGITIS.
HARMON P. B. JORDAN, M. D., and DEERING G.
SMITH, M. D.

We present this case, not because of the brilliant results but rather because of a new and what seems to us a rational treatment. The patient V. K., fourteen months of age, born in Providence, R. I., of Armenian parentage. Family history entirely negative. Past history well until two months ago, developed measles. After a normal convalescence allowed out of doors as usual. Seemed perfectly well until March 14, '21, when she had a convulsion, remaining in opisthotonus for twenty minutes. Kept in bed until admission to hospital on April 11, '21. From March 14 until April 7, '21, no change was noted. Patient seemed lethargic, sleeping greater part of time, never cried, occasionally seemed to have fever and vomited daily. On April 7, following a vomiting spell had another convulsion. Since then there has been no change in her condition or appearance.

Physical examination shows a well developed, emaciated infant, very white and anaemic, in

coma, jaws tightly locked together, arms straight and rigid, hands flexed at wrist and fingers flexed over thumb. At five minute intervals has convulsion which lasts about one minute. No "Koenig," no ankle clonus, no rigidity of neck. Babinski positive, Pupils equal and moderately dilated.

On examination patient was found to have a complete Situs Transversus. Lungs normal. Heart normal, action very rapid. A lumbar puncture was done immediately, spinal fluid pressure increased. Rose 30 cm. in a capillary tube. About forty cc. of fluid removed. Very cloudy and 20 cc. antinephritis serum run in by gravity.

Smears from sediment of centrifuged specimen showed many gram-negative bacilli of varying lengths. No meningococci, no acid fast bacilli. Later the laboratory reported that these organisms were typical influenza bacilli.

As the patient had taken no fluid nor nourishment in four days, she was given 500 cc. of saline intraperitoneally, and nasal feedings were begun. Spinal drainage and spinal washing was tried, but seemed to be accomplishing but little.

On the afternoon of April 13, we decided to wash the sub arachnoid space. Using two lumbar puncture needles, one inserted in the lumbar region as usual, the other inserted thru the anterior of fontanelle into the sub-arachnoid space. By gravity, at the first washing, we allowed 135 cc. normal saline solution to flow thru. Changing the character of the fluid from one containing one cc. plus in 10 cc. of fluid to a fluid which was barely milky.

The washing was done twice on the following day, first washing 190 cc. saline were used. The second using 200 cc., which when centrifuged showed 10 cc. of yellowish pus.

By adding a drop of sterile methylene blue solution to the fluid, we found that two minutes were required for the fluid to pass over the brain down the spinal cord and out the needle. By forcing the fluid in under pressure, we found that the pressure at the lumbar puncture needle in the spine was not increased, nor was the flow accelerated. After forcing in 20 cc. by pressure, two minutes elapsed before more fluid would run in by gravity.

The patient died on the evening of April 14, '21, after an illness of thirty-one days.

CONCLUSION: In patients with open fontanelles, this method of washing seems preferable, to our former method of washing thru a spinal needle inserted in the lumbar region, as by the old method we could get but little fluid above the foramen magnum, thereby washing only the spinal canal.

BOOK REVIEW

PRACTICAL CHEMICAL ANALYSIS OF BLOOD.—BY
VICTOR C. MYERS, M. D.
C. V. MOSBY COMPANY., ST. LOUIS.

This book of less than 120 pages contains in a compact form practically all that the internist needs to know in order to apply the newer methods of blood chemistry to his clinical work. Although exhaustive theoretical discussions are omitted, the text supplies concisely the known facts as to blood changes in various diseased conditions and clearly states the value of the tests for determining these changes. The tabulation of the results of blood analyses is a valuable feature. Ample references to original articles are given. The methods for each determination are briefly discussed and compared, but the author has wisely limited himself to stating the technique of but one method. In each instance, however, he has added the detailed technique of the test when carried out with the use of the simple Myers-Bailey test tube colorimeter. As a practical handbook for the use of the physician the book could be hardly improved.

NOTICE

Through the courtesy of a reliable authority we learn of a resolution passed by the Town Council of New Shoreham, asking assistance in securing a resident physician for that town. If our information is correct, there were three physicians there previous to the war, and report says that all did well. With a resident population of twelve hundred, very largely augmented during the summer months, one or two drug stores and practically no competition, it would seem well worth the while of some physician who is not already firmly established, to give this opportunity his consideration.

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ORIGINAL ARTICLES

STATE HOSPITAL FOR MENTAL DISEASES.*

ARTHUR H. HARRINGTON, M. D.,
State Hospital, Howard, R. I.

From inquiries received at the office of this Hospital from members of the medical profession it is evident that in the minds of many of the physicians of this State there is a lack of accurate information or a vague conception of the relationships and functions of the institutions of the State located at Howard, Rhode Island. This is not surprising, for by common usage all these institutions are grouped under the term "State Institutions," a designation which has crept into official use without there being a specific warrant for the use of the term in statutory language. Again these institutions have all been under the control of a central governing body from the time of their establishment and for several years these institutions, with the exception of the State Prison, were administered by one superintendent. In order to make the present situation clear to the medical profession of Rhode Island, we will enumerate the institutions of the State located at Howard and present features relating to them individually in the attempt to clearly differentiate them and their functions. The property of the State in land at Howard comprises nearly 900 acres. The following institutions are located within this area:

I. State Prison and Providence County Jail, Warden, Charles E. Linscott.

II. Oaklawn School for Girls, Superintendent, Catherine J. Tobin.

III. Sockanosset School for Boys, Superintendent, Donald North.

IV. State Workhouse and House of Correction, Superintendent, Ira E. Higgins.

V. State Infirmary, Superintendent, Henry A. Jones, M. D.

VI. State Hospital for Mental Diseases, Superintendent, Arthur H. Harrington, M. D.

While all of these institutions are near neighbors to one another, yet the only feature which is common to them all, as far as their individual, internal and local management is concerned, is that the head of all these separate institutions report to one body, namely, the Penal and Charitable Commission. The purpose for which these several institutions are carried on have a wide divergence and consequently the methods of carrying out their functions must vary.

We can divide all of these institutions into two groups, namely, the penal and reformatory group to which belong the State Prison and Providence County Jail, Sockanosset School for Boys, the Oaklawn School for Girls, the State Workhouse and House of Correction. With this group we do not for the purpose of this paper need to make any further statement than to emphasize the fact that in their local and internal management they are entirely distinct from one another and their heads have no official relation with one another. The second group comprises the two charitable institutions, namely, the State Infirmary and the State Hospital for Mental Diseases. As far as local and internal management is concerned these two institutions have no relationship one to the other. The superintendents of these two institutions have no official connection, whatever, with one another.

The State Infirmary cares for the aged, feeble, and the physically incapacitated, who reach the Infirmary because they have no one to give them proper care and because they are indigent. The Infirmary has an active Lying-in Department. The Infirmary receives many cases of physical illness both acute and chronic, such cases being received there from cities and towns of the State and from various hospitals. All cases received at the Infirmary are admitted upon an order issued by the Penal and Charitable Commission.

Coming now to the State Hospital for Mental Diseases we have an institution which is devoted to the treatment of mental diseases and for this

*Read before the Rhode Island Medical Society, September 1, 1921.

purpose only. It is an institution which in its local and internal management is distinct and independent like all of the institutions above mentioned. This is the point which I wish once more to emphasize and in regard to which so much confusion exists. This institution now known as the State Hospital for Mental Diseases received its first patients on the 7th of November, 1870. It was then called the State Asylum for the Chronic Insane. Up to 1885, the purpose was that no cases should be received here unless they had had treatment for mental disease in some reputable hospital devoted to the care of such cases. In 1885, in connection with the State Care Act the direct commitment of recent and acute cases of mental disease was authorized. Until 1897 this Hospital was conducted under a lay superintendency. In that year the first medical superintendent was appointed. The developments which have taken place since that day have been in the line of establishing a hospital for the State of Rhode Island for such mentally sick persons as must receive treatment in a State Hospital. Since the opening of the Hospital in 1870 there had been received up to January 1, 1921, 11,805 cases. The average number of yearly admissions during the past five years has been 445. The daily average number of cases during the Hospital year of 1920 was 1,376. The total number of cases treated during that year was 1,919.

In our annual report of this Hospital of 1909 a program was presented setting forth the requirements for the development of this Hospital necessitated on the grounds of sanitary housing, provision for the increasing number of patients, adequate buildings and equipment for the domestic side of the institution, and organization for the medical handling of the work. We are enabled to-day to record the following accomplishments: The original structures of wood with which this Hospital opened have been torn down. A Reception Hospital for acute cases and recent admissions was opened in 1912. A laundry building equal to any increase of patients up to twice the present number was finished in 1915. In 1916 we opened a building for men, a three-story, fireproof structure with a capacity for 316 patients. In August, 1917, we occupied a group

of buildings known as the L-Group. This group accommodates 410 women patients. A structure dating from the early days of the Hospital but having external walls of substantial masonry was remodelled, renovated and occupied as a hospital ward for women in the year 1917. A Domestic Service Building of ample proportions and equipped with cold storage plant and modern conveniences was occupied in 1916. Such, therefore, has been in the main the constructive work of recent accomplishment, the funds for which have been furnished from bond issues to the amount of \$900,000 and from some special appropriations which have been authorized from time to time by the General Assembly. The fact is that the problem in which we have been engaged has been practically the building of a State Hospital, a large portion of it from the foundations up. The idea seems everywhere prevalent that with all these building operations that we must have ample room for patients, not only at the present time but for an indefinite time to come. The true facts are, however, quite contrary to this general impression as can readily be seen in the following statement: In 1910 the daily average number of patients was 1,100 in round numbers. To-day in round numbers we have over 1,400 patients. The normal capacity of this Hospital is considered to be 1,385 patients. The capacity of the old buildings which we have abandoned and which have been razed to the ground has had to be made up in our new buildings and at the same time we have had to accommodate the natural increase in the number of patients over a period of 10 years, so that to-day we find ourselves with actually 25 patients over the normal capacity of the Hospital. This last consideration has a distinct bearing on the future progress of this Hospital. This Hospital should to-day have an appropriation of at least \$500,000 to provide for the very present growth in this Hospital, which I believe is sure to take place. Aside from the physical upbuilding of the hospital plant substantial gains have been made in the medical care of the patients. The effort is being made to give the patients the advantage of every kind of physical care necessary or desirable. The Hospital has on its Visiting Staff physicians who are engaged in nearly every spec-

ialty. We have made the beginning of the establishment of a Pathological Laboratory. It is the aim to develop this laboratory in such manner as to make it of practical service to the living patient with such departments and personnel as such a laboratory requires. This Hospital should be able to serve the medical profession and the community in a manner which keeps pace with all the scientific advances of our times, but without proper financial support the functions of this Hospital are bound to be curtailed.

One great need at the present time is adequate financial means to carry out all the functions which a hospital of this kind is expected to perform in order to serve the State as it should be served.

PSYCHOSES FOLLOWING HEAD INJURY.

ARTHUR H. HARRINGTON, M. D.

There is an opinion quite prevalent among the laity that head injuries are a prominent cause of mental disease. This attitude is frequently encountered in taking the previous histories of patients. It is not uncommon for friends to recall the occurrence of some injury to the head, which from its description and also from its remoteness to the onset of the mental symptoms of the patient, must be regarded as negligible as a cause of the patient's mental condition. It is quite probable, moreover, that the fact of this remote injury would not have been revived at all except for the suggested association brought about by the occurrence of the mental symptoms.

Furthermore, it is very probable that the older writers too readily set down head injuries as causes of mental disease and in some instances it is quite apparent in the light of the present knowledge that some authors have mistaken a result for a cause.

The statistical records of hospitals for mental disease and of psychiatrists have differed appreciably in the frequency with which mental disease is attributed to head injury.

Clevenger, while pathologist at the Chicago County Asylum, in 357 cases in which the causes of mental disease were ascertained, determined that 27 of these were caused by head injuries.

Schlager found 49 cases of mental disease out of a total of 500 due to the same cause. Esquirol, out of 737 cases of mental disease, attributed 22 as due to blows or falls on the head, while Clouston encountered but 12 cases of mental disease attributed to head injury in a period of nine years at the Royal Edinburgh Asylum.

From the totals of the observation of various authors the proportion of mental disease ascribed to head injury approximates 6% of all cases. Of the cases seen in Hospital's for Mental Diseases the writer is inclined to regard this percentage as too great.

Between January, 1908, and July 1, 1921, 5,429 cases were admitted to this Hospital. Only 17 of these cases were diagnosed as "Psychoses Due to Head Injury."

The statistics relating to head injury as a cause for mental disease must be revised and some of the observations of authors eminent in their day must not be allowed weight at the present time. For instance, in the 1878 Lunacy Blue Book for England and Wales, of 1,221 cases of paretic dementia, 46 were set down as caused by cranial injury.

Among the effects upon the central nervous system of traumatism we may have two classes of manifestations; the one being designated as traumatic neuroses and the other as traumatic psychoses.

In this paper we shall not discuss the traumatic neuroses, for they present an entirely different picture from the traumatic psychoses as we classify them. We shall further in this paper limit our subject to those traumatic psychoses which follow head injuries.

The mental disturbances following blows or falls upon the head present psychotic symptoms of a fairly characteristic kind. The amount of damage to the brain may vary from extensive destruction of the tissue to simple concussion. There may or there may not be fracture of the skull.

The common clinical types of traumatic psychoses are divided into three varieties. These three varieties constitute the usually accepted classifications at the present time. They are:

I. Traumatic Delirium: This may take the form of an acute delirium or a more protracted

delirium, resembling the Korsakow mental complex.

II. Traumatic Constitution: Characterized by a gradual post-traumatic change in disposition. That is, the personality may undergo a marked transformation in which the individual may be incapable of continued effort, there may be irritability or explosive emotional reactions. In some cases there is the development of delusional states of a paranoid nature.

III. Post-traumatic Mental Enfeeblement: In which there are varying degrees of mental reduction.

The following cases out of the 17 traumatic psychoses diagnosed in this Hospital since 1908 correspond fairly well to these three types of traumatic psychoses.

As an example of traumatic delirium we will cite Case No. 10,932, a male, 58 years of age, fell from a third story of a building to the ground, received a fractured skull. The plates showed an oblique linear fracture of the right side of the skull extending through the lower portion of the right parietal bone into the squamous portion of the temporal bone. He was taken to a general hospital where he remained six weeks. No operation was performed. On admission to the general hospital he was unconscious for a period. He became incoherent, constantly called to his wife. He appeared to have hallucinations of hearing. On admission to this hospital he was greatly confused and disoriented. Three weeks after admission he began to make rapid improvement, his confusion and disorientation and hallucinations vanished. He remained in this hospital about five weeks. On leaving the hospital 11 weeks after the time of the accident, he resumed his occupation, which was that of a janitor. He was seen by the staff of this hospital six months later and appeared well.

As a second instance under Type One, we will cite Case No. 9,064, a woman, 29 years of age. She was thrown from an automobile, receiving injury to the head, but without diagnosis of fracture. She received other bodily injuries. She was first taken to a general hospital, where she remained about two weeks. The patient was unconscious for a few hours but cleared up and her mind appeared normal for about one week

After this lapse of time she became noisy, and finally so maniacal in her manifestations that she was committed to this Hospital. On admission she was clouded, disoriented and given to fabrication. She made a rapid improvement however. She remained in this Hospital less than two months and was regarded as recovered at the time of leaving, which was a little less than ten weeks from the receipt of the injury. This case is also an instance of what may occur in some cases of head injury. That is, a period of apparent normal mentality on regaining consciousness, but with the development later of symptoms of marked mental disturbance which happily in this was of comparatively short duration.

Case No. 10,572, corresponds to Type Two, characterized as Traumatic Constitution. On January 3, 1910, this man, when 52 years of age, fell from a ladder, receiving a fracture of the skull. He was first treated in a general hospital. This man had been married for 20 years at the time of his accident and had two children. His disposition had always been good and he was thoughtful and considerate of his family. He remained in the general hospital for about six weeks. He had a period of unconsciousness lasting several days immediately following the accident. On his return to his home he very early showed a complete change in personality. He became cross and abusive, so that he was very difficult to live with. After a time he returned to his work, namely, that of a painter. In this he became less productive as time went on and finally gave it up. He would remain at home and stay in bed all day. He had emotional outbreaks, when he would destroy furniture. He began to have paranoid trends, such as suspicion of his wife's fidelity and ideas of poisoning. He became suicidal. From the years 1916 to 1918, he was cared for in a private institution. On January 28, 1918, he was committed to this Hospital, where he remained to the time of his death, June 30, 1921. Following admission he showed no change for the better. His memory was impaired. There was an entire absence of insight.

As an example of Type Three, Post-Traumatic Mental Enfeeblement, we will cite Case No. 8,621, a male, 61 years of age when admitted to

this Hospital on July 20, 1913. On July 5, 1913, patient was struck by an automobile and received an injury to the head. He was rendered unconscious and taken to a general hospital. No fracture was demonstrated. In a few hours' time he became delirious and so much disturbed that he was committed to this Hospital fifteen days later, where he has remained ever since. He was confused, irritable and restless when admitted here. He had speech defect, tremor of tongue and fingers, exaggerated patellar reflexes, pupils unequal and irregular. He is disoriented, clouded, with impaired memory for recent and remote events, attention blunted, rambling thought and absence of insight. At the present time he is markedly demented, rambling in thought and has no insight. Before the accident he is said to have been a rugged man. His Wassermann on the blood was negative.

In regard to the pathology of psychoses following head injury very little has been written. Kraepelin states that autopsies in fresh cases of brain injury often show no extensive lesions outside the immediate point of injury. However, later, there may be extensive degeneration of nerve tissue in apparently circumscribed injuries. We will have to assume, therefore, that finer disturbances go on far outside the original point of impact. Often nerve cells and the fibers dependent upon them may degenerate quite extensively.

It seems to me in the case of Type One, namely, Traumatic Delirium, in which after a few days, a few weeks or even a considerable longer period, there appears to be a complete recovery that following the injury there may be an edema of brain tissue, and the course and duration of the case will depend upon the readiness with which the edema is absorbed. It would seem not improbable that after an edema exists in a given area for a considerable period that this might set up degeneration of cellular and other brain structures.

WHOM SHOULD WE COMMIT?*

By GEO. B. COON, A. M., M. D.,

State Hospital for Mental Diseases, Howard, R. I.

It is a singular fact that while the history of medicine covers a period of over 4,000 years, it

has been but little over a century that any consideration has been given to the diseases of the most important organ we possess. So fathomless have seemed the capacities of human minds, so multifarious their manifestations, that men steeped in superstition from prehistoric time have found a simple and easy explanation for eccentric manifestations by attributing them to evil spirits—believing the cause to be dependent upon a defective personality or some extraneous evil influence, rather than to any functional or organic disease of the brain itself.

One reads with interest and some little amusement the report of the Superintendent of a Massachusetts Insane Hospital for the year 1820, in which he states, as evidence of his humane and advanced treatment, that upon pleasant days the patients were drawn out upon the lawn in their cages that they might enjoy the fresh air and sunshine.

Although the subject of insanity has now been studied for a hundred years and quite intensively for the past fifty, the study still seems but in its infancy. No definition of the term has ever been formulated that will stand the analysis of the courts and few of the recent books attempt to define it. A recent writer has rejected the term in its accustomed sense and instead defines it, not as a disease, but as a term applied to a class of people in the social scale who are unable to adapt themselves to their environment, which for our purpose to-day meets the situation very well and renders more easy the answer to the question "Whom should we commit?"

The layman as a rule seems to recognize but three types of mental disease, the maniac, the fool and cases of "softening of the brain"—the latter term covering all forms of advanced dementia. Many physicians who have not had the advantage of the teaching of the past 25 years will frankly admit that this classification also satisfies them and they are not prepared to enlarge upon it. However, it is upon the general practitioner that the responsibility devolves for the committal of most of the insane, and it is but fitting that he should be given a few hints as to the proper course to pursue, for in many cases his responsibility both to the individual and to the community is great. He does not need to

*Read before the Rhode Island Medical Society, September 1, 1921.

know that our present classification, comprising some 60 odd forms of mental disease, is a compromise not wholly satisfactory to any one, or that we find many cases that do not seem to conform to any of these types. All he needs to determine is whether or not the case under consideration, in his judgment, needs hospital care. We do not expect, nor do we consider it any reflection upon the physician's intelligence, if he does not make a diagnosis for us. Inasmuch as psychiatrists often disagree among themselves it is not to be expected that a general practitioner's diagnosis would in all cases pass unchallenged in our clinics. A description of the patient's conduct and the reasons for his committal would often be more helpful than opinions. I remember well a certificate offered by two physicians in Vermont over 20 years ago, in which they glibly stated that "This patient has under our observation passed through the several states of mania, melancholia, paresis to dementia, and no longer possesses his rational, ideational or volitional powers."

In many states a copy of the physician's certificate accompanies the mittimus to the hospital and while one like the above might be of little service there are many borderline cases, and cases of mutism or concealed delusions where it would be of great assistance to the hospital if we but knew the facts upon which the committal was based, and it seems that this requirement might well be incorporated in the Rhode Island statutes.

In examining a case for committal there are certain symptoms for which the average physician looks, viz.: maniacal excitement, incoherence, dementia, melancholia or delusions. With one or two of these symptoms he usually considers himself justified in committing the case. If, on the other hand, the patient is a glib and fluent talker, is coherent, reveals shrewdness and wit, is clever in concealing his delusions, and is not too extravagant in his claims, they will often refuse to commit the man, regarding him perhaps as eccentric, but not insane, until he commits some overt act that stamps him as a menace to the community, when he is promptly committed after the harm is done.

While we should zealously guard the rights of the individual, we must not be insensitive to the

rights of the family or the community for their claims are, after all, paramount. It has been decreed that men must adapt themselves to certain requirements of society or suffer the penalty. Consequently when we find a man constantly invading these rights, or evading these requirements, it is incumbent upon us to see that his activities be restrained until his mental status can be established and his capacity for doing harm can be determined.

One often hears the statement that there are more insane at large than we have in our institutions, and this is quite possibly true, but evidently the vast majority of these are meeting the chief test that we can apply and that is the ability to care for themselves and adjust themselves to their environment. Harmless eccentricities which do not impinge upon the rights of others may be ignored, even delusions are not inconsistent with the man's ability to accumulate wealth and be a good citizen, but when his reactions to these delusions or fancied grievances lead him to threaten retaliation upon his so-called enemies it is time that some action be taken.

In the crowded condition of our institutions it is necessary that we parole or discharge a large number of insane every year and before doing so we wish to satisfy ourselves upon the following points: Will he do harm to himself or others? Will he be a source of anxiety or annoyance in the community? and can he support himself or has he friends who will be responsible for his care and support?

We frequently release patients who have active delusions of persecution, but not until we are well satisfied regarding the probable reaction of such cases to their delusions. While the positive aggressive character, possessed of persecutory delusions, should be regarded as a dangerous type, we have the negative characters who will whine and cringe like a whipped dog who dares not even snap at his persecutor.

It will be seen that the question largely resolves itself into a discussion of conduct within certain well defined and generally recognized limits. If the man has shown a marked departure from his usual habits of life that causes anxiety to his family or neighbors the cause of this change should be rigorously investigated

and salient features be not lightly dismissed. Many a case can put up a good front before the doctor, who is simply intolerable in his home. If he is of a seclusive or sullen temperament, is jealous, suspicious, unduly oversensitive, quick to take offense at fancied injuries, and his resentment leads him to make threats against others, prompt action should be taken. It is wholly probable that he has delusions of a persecutory nature and quite likely hallucinations of hearing. When the average man is so quick to resent an affront one need not be surprised that the insane patient attacks his victim without a moment's warning prompted by imaginary voices which we cannot hear and by delusionary mental processes which we cannot comprehend. If the wife of a chronic alcoholic complains that her husband has delusions about her, you should recall that these cases are prone to have delusions regarding the fidelity of their wives and if one delays till he obtains some convincing proof of the man's insanity, he may find it in a tragedy.

I would suggest that you let us pass judgment upon the mental defectives who show vicious or anti-social tendencies, those born bereft of moral sense, the epileptics who are subject to violent outbreaks, the periodic drinker—if these attacks mean the alternative of a jail sentence—and all cases of marked conduct disorder with anti-social tendencies, whether attended with delusions or not. Quite a large percentage of our cases have no delusions or hallucinations and possibly none of the symptoms for which you naturally look, yet for one reason or another their committal was well justified.

I can best illustrate a few points that I have made by citing certain cases within my personal experience which will demonstrate how successfully delusions may be concealed.

Many years ago a young man was committed to Taunton with a history of delusions of persecution. For some weeks he was mute, he then began answering questions rather grudgingly but always coherently and evaded all my efforts to draw him out upon the subject of his delusions, though I had frequently caught him in the attitude of a listener when the ward was quiet, and his expression was always one of suspicion and resentfulness. Not until ten months after his

committal, though I saw him twice daily, did he break the reserve surrounding him and give clear proof of his delusions, and on this morning, which happened to be one in which I was in great haste to get away, he held me for two hours pouring forth delusions of a dangerous type hardly allowing me to interrupt him with a question.

Another man of 30 became violently insane in a theatre, rushed down the aisle crying murder and running hatless down the street, fell into the arms of a policeman. He thought the Devil was after him and in his excitement, revealed so many delusions of a persecutory nature that it was evidently easy to commit him. By the time he reached the hospital he had regained his composure and flatly denied all the statements made concerning him. During his whole stay at the hospital his conduct was exemplary. He was always cheerful, ready to help in the ward work, frequently challenged me to a hand at cards on my trips, talked freely and intelligently upon the current topics of the day, and apparently upon every subject except the incidents leading to his committal. His sister and friends, who called, declared he was as well as ever and insisted upon his discharge. I refused because I considered him a dangerous man. When asked what his delusions were and what proof I had of them I could but answer, "I do not know. He will not tell me but I have caught him listening to false voices and I know that he cannot free himself from the delusions he had when he came." Upon their third visit they became so extremely insulting in their estimate of my knowledge of insanity that I took the matter to the Superintendent, who replied, "Tell them if they will take that man to Gloverville, N. Y., where his residence is, and assure us that he will never again become a charge upon the State of Massachusetts I will discharge him." At that time it was customary to discharge outright cases leaving the State, but to parole for 60 days all other cases, and these were automatically discharged if not returned within the 60-day limit. This case was discharged but the relatives broke faith with us and took him back to Brockton instead. The patient, believing that he was on parole, conducted himself with perfect propriety for 60 days and on the 61st shot a policeman and at

last reports was in the hospital for the criminal insane.

Many years ago I took an insane woman into my home who was said to have active delusions of persecution and false hearing. Three times a day we sat with her at meals for a period of seven months, during which she gave no evidence of a delusion, neither was she considered insane among the neighbors with whom she freely mingled. With the exception of her facial expression and two or three occasions upon which I saw her turn suddenly and with an angry expression toward a member of my family who had spoken, I could have offered no convincing proof of her insanity until one day I found that she had appealed to the sheriff for the right to carry a revolver, and had sought shelter with neighbors saying that I was going to kill her and that she had seen me getting the knives ready with which to do it. When I went after her she tried to laugh this off, but I decided the time had arrived for a little more restraint than I was authorized at that time to give and I had her committed.

A classmate, who was lawyer of some prominence in Boston, married his boyhood sweetheart who had graduated from Smith College. Some years later without any cause she developed delusions of jealousy about her husband. These delusions involved no particular woman, but she became obsessed with the idea that she was going to lose her husband and her condition became such that she was committed to McLean Hospital. Here she showed marked improvement and her husband took her out against advice of the hospital physicians. I met her at a reunion about a year afterward when she appeared very happy and manifested no symptoms that attracted my attention. During a winter following the couple played cards two evenings a week with a physician who had had considerable experience with mental cases, and on but few occasions did she make any remarks that struck him as peculiar. When summer approached she went to their summer home and was accustomed daily to meet her husband at the afternoon train and drive him to their home. One day she met him with a two seated carriage and insisted upon occupying the rear seat. As soon as they had reached a secluded spot she

sent three bullets into the back of his head killing him instantly, and later manifested no sorrow because she had forever removed him from the toils of designing women.

Now these were all dangerous types who were clever in concealing their delusions, even from one familiar with such cases, and if the history of your case resembles these and your intuition tells you that there is something wrong, though indefinable, take some action. Do not be satisfied with one or even two examinations and if you feel that you cannot commit the case, consult with a specialist or at least see that the case is kept under the closest observation that no harm be done to others.

There is another type of which I wish especially to speak, namely, of the dignified, well to do business man, highly respected in the community, whose keen judgment has won him a competency, yet who suddenly develops eccentricities of conduct not at all in keeping with his previous behavior, either in lapses in morals or in business judgment. Such cases will often make the most foolish and startling investments. They may be somewhat garrulous and familiar in their conversation, but because they seem to have no delusions the doctor will hesitate to commit, or the family flatly refuse to subject the husband and father to the humiliation of guardianship or committal till his property has been dissipated and the family is penniless.

For my illustration I will take the Superintendent of an Insane Hospital in a neighboring state. He had served in that capacity for nearly 20 years, was highly respected and an ideal husband and father. One of the first changes noticed was in his attitude toward his children. He declared that "he who spared the rod spoiled the child" and from being a very indulgent father, he began to whip his children unmercifully on the slightest provocation until their cries caused a protest among the neighbors. He became much excited over trivial matters in administration and lightly pigeon-holed important matters that demanded instant attention, until his inefficiency led to his retirement. Not long afterward I had occasion to take a short railroad trip with him and noting his mental condition I remarked a few days later to the executive officer of the State Board of Insanity,

whom I knew was his intimate friend and former associate upon the staff of the same hospital, that the doctor acted and talked like a parietic. He replied, "Why no, I don't think there is anything like that, but he has a nervous break-down and I hear Bright's Disease." The sequel I heard about three months later. He had saved little money but at this time a \$15,000 life insurance policy matured and on one of his trips to the city he was induced to invest \$7,000 in some fraudulent mining scheme. He became a little apprehensive upon his return home that night and agreed with his wife that he would go to the city the following day and get his money back, but upon his return the following evening it was found that the crooks had inveigled him into investing the other \$8,000, none of which was recovered, and the family was left destitute while the doctor died a few weeks later in an asylum. This is illustrative of hundreds of cases, some of which have doubtless occurred within your own experience; but what made this seem particularly striking was the fact that the man himself was a psychiatrist and had upon the day I last saw him attended a funeral where he met a score of his fellows who conversed with him briefly without noticing the symptoms that could hardly have escaped any of them had their conversation been prolonged.

In citing the above cases it will be noted that all mention of specific forms of insanity has been studiously avoided and attention has been concentrated upon symptoms and conduct. Few persons reach the stage demanding committal without the fact becoming apparent to all about them that "something is wrong" with the individual, but so imperfect or erroneous is the layman's conception of insanity, that the case must manifest violence of advanced dementia before they think his committal justified. In the main the responsibility rests upon the general practitioner, to observe and properly evaluate the symptoms of those cases in his community who show marked changes in conduct or business judgment or harbor ideas of fancied grievances and persecutions, and in the light of tragedies that appear almost daily in our papers it is difficult to see how he can escape public censure if he is slow to act when a given case has been brought to his attention.

The history given by family or friends will often give the key to the case and the symptoms cited can usually be easily recognized by any general practitioner; for his knowledge of the rules governing human conduct and the usual reactions of the average individual to various situations, coupled with ordinary common sense, will enable him to satisfy himself as to whether or not a man's conduct is rational or if he needs hospital care. Having recognized the symptoms and failed to act, he can hardly escape feeling a guilty sense of responsibility for a murder which the subject so often commits, or for the tragedy, hardly less painful, when a large estate has been dissipated and elderly people left destitute, through the lack of moral courage on the part of the medical adviser who fears to offend his patient by taking the only rational step to protect the man from himself.

CASE REPORT

REPORT OF A CASE OF TORSION OF THE OMENTUM AND DOUBLE FEMORAL HERNIA.

By CHARLES O. COOKE, A. M., M. D.
Providence, R. I.

The patient, a woman forty-eight years of age, was seen in consultation with Dr. J. B. Bryer on March 19, 1920, with the following history:

Five days ago, patient had a sudden attack of severe pain in the epigastrium. There was no nausea nor vomiting. The pain became more severe and localized in the right lower quadrant. Bowels were constipated. There was slight fever and acceleration of pulse. Four days after onset of symptoms, a large mass was discovered in the right lower quadrant of the abdomen.

Past History. Has always been well except for a right femoral hernia of 20 years duration, which was operated sixteen years ago, but recurred within three weeks. Recently a small femoral hernia developed on the left side.

Physical examination of abdomen showed a tender mass in the right lower abdomen, the size of a large grape-fruit. Temperature was 100° and pulse 96. There was a large femoral hernia on the right and a small femoral hernia on the left. The leucocytes were 13,200. The probable

(Continued on page 140)

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EDITORIALS

THE STATE HOSPITAL FOR MENTAL DISEASES.

In public print and out of it we have heard much in regard to conditions and needs of the State Hospital at Howard.

Something of these needs was tersely but distinctly brought out by the Superintendent, Dr. Harrington, in his opening address at the meet-

ing of the Rhode Island Medical Society, held at the State Hospital, September 1st, the text of which will be found in another column and to which the attention of the reader is recommended.

In the literary program, a number of papers were presented bearing upon many mental diseases and incapacities. It is regretted that owing to lack of space, we find it necessary to divide the publication of the series into two or more issues.

THE STATE HOSPITAL FOR MENTAL DISEASES.

At the September meeting of the Rhode Island Medical Society, held at the State Hospital for Mental Diseases, there was considerable spirited discussion of the conditions of that institution, the lack of funds appropriated by the Legislature for its upkeep, and the difficulties under which the Penal and Charitable Board labored.

Apparently the chief idea advanced as to the cause of the difficulties was that too much power is wielded by politicians, who are not inclined to follow suggestions made by those in touch with affairs at the Institution.

It has occurred to the writer that possibly there is another and more potent reason for this seeming disregard of advice on the part of the Legislature, and that is, that with a constantly increasing personnel of the Board, opinions on questions are apt to become more divergent and counsel to be so varied and confusing as to leave the members of Legislature confounded rather than illuminated. The Board has grown progressively from three members to five, to seven, and finally to nine. Its very size may be so unwieldy as to make its findings and suggestions resemble a congressional inquiry with its majority and minority reports.

If, as seems evident on the surface, the Board as now constituted is unable to impress the Financial Committee forcefully enough with its recommendations, would it not be wise to try the experiment of appointing a single well paid Commissioner of Penal and Charitable Institutions? Such an officer should be a man trained in the administration of such institutions, with an intimate knowledge of the requirements as to equipment and personnel and have keen business sense, and of such cultural attainments that his dictum would of necessity carry weight with the arbiters of the people's money. A commission of one man would, at least, have the advantage of unity of program.

MOTHERHOOD.

Probably never in all history has there been a time when woman has held the exalted position that she now occupies.

Back to the dawn of any form of organized thought that we may term civilization, and before, woman was the toy and often the slave of man; the only use of which was to serve his pleasure or comfort, and held as a necessary agent to perpetuate a race of *men*—even to-day in many of the unchristianized (so named) countries, the condition of woman has been but little improved and the attitude of subserviency is still extant.

This is susceptible to one interpretation "The right of the Mightiest" for it will hardly be denied that the male of most species is physically the more powerful and capable of subduing his mate to his will.

Modern times, however, have admitted the sunlight of a sense of justice; thought and education have evolved a recognition of human rights and after centuries of artificial gloom and injustice the chrysalis has burst and woman has emerged, alert, intellectual, intuitive; developing a power and aptitude not altogether anticipated and her "place in the sun" has become assured; her genius and mental brilliancy have long since been accepted as in no sense secondary to mans. For good and for evil has she evoked her power, probably the most potent factor in the uplifting of mankind and by caprice or circumstance she has been more fatal to empires than have armies or disease.

Suddenly, however, a new era has opened and we find her entering fields of effort heretofore unexplored by woman; she is in the councils of municipalities and in the legislature; she drives a machine, she is an office manager and any of the professions is no longer a novelty to her. She is a machinist and a carpenter, she is meeting man upon his own (?) ground with the assumed desire of equal responsibility and equal rights.

To what does all this portend? Does she indeed desire to be the equal of man? Only that? Is she forsaking her transcendancy for only that? And when attained, by reason of her physical frailties will the wheel of natural balance again revolve and Might again make her a victim to its power, forcing her through centuries, to fight her way through her cycle of fate?

There is a greater destiny; for though ambition or circumstance may urge toward a certain social or economic goal, no one may gainsay that the real, paramount destiny of woman must be motherhood, and while other things may be achieved, they are overshadowed by this immutable fact and deep in her intuitive mind is this knowledge firmly established.

Consider the little girl, natural and as yet unhampered by the veneer of conventionalities, coddling her toy doll, (and if she hasn't one should speedily manufacture one from anything at hand) caressing and caring for it with profound solicitude and we have a picture of the maternal instinct which though in her later teens and early womanhood may be in a measure subdued, will never perish; for with all else or with nothing else, nothing may approach the majesty of motherhood and no woman, and for that matter, no man, can or may grasp the fullness of life who has never felt the trustful, clinging fingers of little ones and who is childless to the end; for when memories are our companions in the twilight of life, there can be no solitude like this. Though a mother may have been embittered by want and disappointed in her ambitions for herself or offspring, there will always live in her consciousness a knowledge that her measure of life has been more nearly complete and her real destiny has been in the great accomplishment of motherhood. In the realization of this with the modern freedom of thought and action is the true equality.

DEFECTIVES AS AUTOMOBILISTS.

It should be brought to the attention of the State Board of Public Roads that the licensing of persons defective either physically or mentally should receive more attention than it has in the past. It is thoroughly appreciated that many persons are being licensed to drive motor vehicles who are lacking in ordinary common sense and in the ability to use proper judgment in the case of an accident. This is, of course, to be expected among the many thousands who are licensed to drive in this State. It is not this class to whom we refer. We know of several instances where cripples have been licensed to drive automobiles. A few years ago a serious accident occurred in

Providence in which the driver of the machine at fault was found to have a paralyzed leg, and this leg, equipped with a brace, was used to control the clutch. Another case has recently come to our attention in which the driver's legs were badly deformed. The bones are abnormally brittle and are likely to be broken at the slightest strain. However this man is licensed to drive motor vehicles. It is the duty of the State Board of Public Roads to protect the public against unfortunates of this class, and it should be brought to the attention of the Board that these persons are not physically fit to be entrusted with the grave responsibility of driving motor vehicles in our crowded streets.

SOCIETY MEETINGS

QUARTERLY MEETING OF THE RHODE ISLAND MEDICAL SOCIETY.

SEPTEMBER 1, 1921.

The regular September Meeting of the Rhode Island Medical Society was held September 1, 1921, at the State Hospital for Mental Diseases, Howard, R. I. There were approximately 90 members present and the morning was spent in inspecting the buildings and equipment of the Hospital.

At 1 P. M. luncheon was served in the Chapel. Members of the Penal and Charitable Board, thro whose courtesy the meeting was held at the hospital, were present at the luncheon and the scientific meeting.

During the luncheon, an organ recital was given by Mr. Harry C. Kenyon and singing was furnished by a mixed choir of 50 patients of the State Hospital for Mental Diseases.

The meeting was formally called to order at 2 P. M. by the President, Dr. George S. Mathews.

The minutes of the annual meeting were read by the Secretary.

The chairman of the Penal and Charitable Board, Mr. Monahan, welcomed the society to the institution for its quarterly meeting.

The following papers were then presented:

I. The State Hospital for Mental Diseases, by Dr. Arthur H. Harrington, Superintendent, illustrated by lantern slides, showing former and present conditions at the hospital.

II. Results of Systematic Treatment of

Syphilis in Mental Cases, by Dr. Howard I. Gosline.

III. General remarks on Endocrine Disorders and their relation to the individual, Dr. Frederick J. Farnell. (This paper was read by the Secretary, in Dr. Farnell's absence).

IV. Treatment of Thirty Selected Cases of Epilepsy with Luminal, Dr. William M. Hughes.

V. Whom Should We Commit? Dr. George B. Coon.

VI. The Value of Knowledge of Psychometric Methods to the Doctor. Dr. Banice Feinberg.

VII. Psychoses Following Head Injuries. Dr. Arthur H. Harrington.

A vote of thanks was extended to the Penal and Charitable Board, to Dr. Harrington and his Staff, for the courtesies extended the society.

Dr. J. W. Keefe eulogized Dr. Harrington and his work in improving the conditions at and building up to its present state, the State Hospital for Mental Diseases. He called attention to the hampering effect the lack of funds appropriated is having on the Hospital and urged every member of the Society to use his influence to arouse public interest in the need of proper financial support for the Institution.

Dr. G. T. Swarts presented the following resolution:

"Resolved, that in the opinion of the Rhode Island Medical Society, it is apparent that sufficient funds have not been appropriated by the State Legislature for the medical care of the inmates of the State Hospital for Mental Diseases, and it is hereby urged upon the Legislature to make every effort to provide sufficient funds for the above purpose." Seconded by Dr. C. H. Griffin. An amendment to the foregoing was offered by Dr. C. W. Skelton, providing for the appointment of committee of three to investigate conditions at the State Hospital for Mental Diseases in regard to the sense of the foregoing resolution and to report to the Society at its December meeting. This amendment was subsequently withdrawn by Dr. Skelton after it had been pointed out that any resolutions adopted at this meeting must be referred to the House of Delegates for final action. The original resolution was then passed.

Dr. Ira D. Hasbrouck deplored the lack of funds appropriated to the uses of various Institutions of the State and called attention to conditions at the School for Feeble Minded at Exeter. He advocated a Hospital for Epileptics.

Adjourned.

Secretary, J. W. LEECH, M. D.

WOONSOCKET DISTRICT MEDICAL SOCIETY.

At the last regular meeting of Woonsocket District Medical Society, held July 7th the following officers were elected for the coming year:

President—Dr. E. F. Hamlin of Slatersville.

First Vice President—Dr. A. A. Weeden.

Second Vice President—Dr. W. C. Rocheleau.

Secretary—Dr. A. H. Monty.

Treasurer—Dr. A. Constantiman.

Councillor—Dr. J. A. King.

Delegate to Rhode Island Medical Society—Dr. J. E. Tanguay.

Following the election of officers a very interesting and instructive address on "Infant Feeding" was given by Dr. Robert M. Curtiss of Boston, after which adjournment was taken to the nurses dining room and a very dainty luncheon was served by Miss Lucy Ayers, matron of the hospital, assisted by the nurses.

HOSPITALS

RHODE ISLAND HOSPITAL.

J. M. Peters, M. D., and D. L. Richardson, M. D. left Sunday, September 11, to attend the Hospital Superintendent's Convention at West Baden, Indiana.

Dr. William O. Rice returned from his annual vacation on September 12.

Dr. Niles Westcott leaves for his annual vacation on September 17.

Dr. Lucius C. Kingman is away for the month of September.

Dr. N. D. Harvey recently returned from a short vacation.

Dr. James F. Boyd is away for a two weeks vacation to recuperate from a recent attack of LaGrippe.

Mr. John E. Groff, apothecary, is now able to attend to part of his duties after a prolonged illness.

Dr. Charles E. Blackway finished a two year internship at the Rhode Island Hospital on October 1, and will practice in Fall River, Mass. Dr. Blackway was operated upon recently for acute appendicitis.

Dr. Maurice C. Miller finished a twenty-one months internship at the Rhode Island Hospital, October 1. He intends to take up surgical work at the Mayo Clinic.

The radium treatment under charge of Drs Pitts, Sawyer and Boyd have increased considerably. The necessity of purchasing more radium is under consideration.

The Appliance Shop established at the Out-Patient Department for the making of special splints, braces, foot plates, jackets and other orthopedic appliances is now in full operation.

The new gasoline propelled lawn mower presented to the hospital by Mr. Jesse H. Metcalf, President of the Board of Trustees, has been very successful as a labor and time saver during the summer.

The inside work on the Jane Frances Brown Building for private patients is progressing favorably after much delay caused by strikes in the building trades.

The Out-Patient Department has been completely repainted inside during the summer.

A tennis tournament among the internes was won by Dr. H. Russell Smith.

Dr. Halsev DeWolf and Dr. Geo. S. Mathews, visiting physicians, started their services September 1.

Drs. Charles E. Hawkes, Henry Hoyer, John Ferguson and Frederick V. Hussey, visiting and assistant visiting surgeons, started their services September 1.

Dr. Hugo M. Kersten is serving as substitute interne during the vacation period.

Dr. Earl A. Bowen and Dr. William N. Hughes will start the regular two years service as internes on October 1.

RECENT APPOINTMENT TO THE OUT-PATIENT DEPARTMENT.

Dr. Earl R. White	Medical Department
Dr. Frank B. Berry	Medical Department
Dr. Henry B. Moor	Medical Department
Dr. Roy Blosser	Dermatological Department
Dr. Arthur E. Martin	Orthopedic Department

Dr. Joseph E. Raia,	Ophthalmological Department
Dr. Samuel Kennison	Children's Department

TRANSFERS.

Dr. Harold E. Miner has been transferred from the Medical Department to Gynecological Department.

A class of forty-seven probationers is expected for the September nurses class.

Respectfully,

NORMAN C. BAKER, M. D.
Secretary Staff Association.

(Concluded from page 135)

diagnosis seemed to be Appendiceal Abscess and operation was decided on.

March 20, 1920. Exploratory Laparotomy. Removal of strangulated omentum and appendectomy.

Four and one-half inch right rectus incision; the right lower quadrant of the abdomen was filled with haemorrhagic omentum, the tip of which was adherent to the right femoral canal. The omentum was hard and porky and strangulated by torsion of the pedicle. The tip of the omentum was freed from the femoral canal and the pedicle was ligated and cut away close to the transverse colon. This removed approximately one-half the omentum, the other half being normal. The appendix was normal and was removed in the usual manner. Pelvic organs, gall bladder and other organs were apparently normal. The incision was closed in layers without drainage. Convalescence was uneventful and the incision healed per primeau.

On March 30, 1920, a second operation was performed for cure of double femoral hernia. The sac on the right side was very large and in intimate relation to the femoral vein. The sac on the left side was much smaller.

Convalescence was uneventful and both wounds healed per primeau.

The patient has remained entirely well to date.

COMMENT. Torsion of the omentum is a rare condition, but must be added to the large number of conditions which cause the acute abdomen.

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ORIGINAL ARTICLES

GENERAL REMARKS ON ENDOCRINE DISORDERS AND THEIR RELATION TO THE INDIVIDUAL.*

FREDERIC J. FARNELL, M. D.,
Providence, R. I.

Not long ago a writer in commenting upon this problem of ductless glands stated that in the reading of papers and articles by "clinical endocrinologists," especially the French and the Italians, "the physiologist can scarcely escape the feeling that here he has broken through into an uncanny fourth dimension of medicine, where the familiar canons and methods of scientific criticism are become foolishness, where fact and hypothesis are habitually confounded and 'nothing is but what is not.'"

"Nothing is but what is not"—is this not quite characteristic throughout our work? Has it not been responsible for our inability to help and relieve the sufferings of so many individuals? Has it not been the cause of the many so-called "combinations" with which the market is flooded to-day and to which large numbers of the laity seize upon with intense eagerness merely because someone has been relieved of what was apparently a distressing symptom, not sufficiently relieved by the usual pill or powder. These individuals, who are so readily swayed into the use of these products, are usually of the unstable and nervous type and are really driven into these reactions by the profession themselves. The treatment of symptoms to-day is decidedly different from the time when the kindly family doctor, with his sympathetic ministrations not only came to his patient who was overflowing with faith and expectancy, but also came as a friend and a deliverer. The kindly family doctor met his patient upon his own level,—and treated, along with his pill and powder, the individual. Without the aid of modern and scientific laboratories he gave his acquired therapeutic

knowledge along with his inherent psychic support. To-day we are equipped with laboratories in which chemical, biological and physical disorders can be checked up by the method of induction, but this method alone can never replace wholly either the deductive, which is the method of mathematics, or the introspective or synthetic, which is the psychological.

This rigid insistence upon the materialistic and absolute neglect of the psychological and even the physiological has led to disaster, either chronic invalidism, neuroses and even death. Many of these physical symptoms are merely indicators arising from origins which have no apparent direct relation of the organ involved and develop in a region one may never suspect disturbed. This can readily be described by the most frequent diagnosis of hyperthyroidism, an entity undoubtedly, but far from as frequent occurrence as exists to-day. During the draft, many cases were seen and called hyperthyroidism because they manifested a rapid heart and appeared restless, some with and some without an enlargement of the thyroid. Many of these cases after being refused by the draft board adjusted themselves and were apparently quite well,—some who were accepted even though suspicious adjusted themselves and appeared well,—"nothing is but what is not."

Not long ago a woman of fifty-two years appeared for an examination with the diagnosis of "hyperthyroidism." The symptoms of which she complained were a rapid heart and an enlarged thyroid gland, both of which date back at least five years and at no time had she been seriously ill, (occasional attacks of cardiac distress). The question of hyperthyroidism increases from day to day for one would expect that with this degree of cardiac disorder there should be a greater toxemia. This cardiac distress causes her labored breathing which surely will increase her basal metabolism, thus adding another symptom (mechanical) in favor of the disorder, notwithstanding the fact that there is no toxic state manifest. These symptoms are

*Read before the Rhode Island Medical Society, September 1, 1921.

indicators of a distant disorder and do not point to a disturbed function of the gland *per se*. The psychic and physiological functions are the real factors at play and management has been directed along those lines.

The same line of thought might be directed towards the stomach. Dr. Taylor once aptly said, in speaking of diseases of the spleen, that the spleen was more sinned against than sinning. To some degree this is true of the stomach. The old disorder known as dyspepsia or better as gastric or intestinal indigestion is not the fault of the stomach or intestines at all in a large percentage of cases—it is worried by some irritable focus elsewhere. When one observes gastric symptoms intermittently one should feel the irritation other than in the stomach. If a patient can eat at times freely and fearlessly anything and everything, rejecting nothing, and at other times cannot take anything without regurgitation, or is in pain, it is unlikely that the stomach is involved. Even in severe cases the pain may be directed towards the gall-bladder or appendix and surgical interference accepted only to find a slow convalescence with marked disorder of the bowels, changes in the skin, profuse sweats, etc. These repeated attacks of gastric or intestinal disorder create a fearful state and marked tension in the patient, increasing their emotional activities and they, in turn, irritating the physiological activities.

It is such types of cases where the auto-suggestion of Christian Science achieves its extraordinary results—results which surprise and even annoy the medical or surgical practitioner.

Should one carefully investigate the type of individual in which a disorder develops, one would be astounded at the infrequency of the hard and fixed clinical entities. No doubt too much stress might be laid upon the personality and efforts wasted along the lines of mental adjustment in some few cases, but not so in the majority. Should one investigate the make-up of a series of ward cases suffering from various organic diseases, one would find a large percentage with personality deviations.

Some writers have attempted to classify every temperament,—Ferranini describes the "congenital angio-hypotony,"—Pende the "hypoadrenal

temperament,"—Eppinger the "vagotonic temperament," and so forth. These individuals manifest all sorts of "pathies," which are so annoying and disagreeable to them that the slight external irritation will disturb their psychic balance, throw them into the depths of anxiety or even despair. To them scientific medicine is only one arm in the management and there can be no question that laboratory reports, pills and powders alone, with none of which is there ground for complaint when used in their proper places, will "Pluck the memory a rooted sorrow." And yet they demand a certain "faith" or protection hence "they burn incense at the altar of strange divinities."

The seriousness of this problem is no more manifest than to him whose work brings him in contact with the mentally unbalanced or poorly balanced, where contact with these various agencies has increased the warping of their personality which has so conflicted with society that it no longer is possible for them to live happily or at ease. This disturbed psychic function in turn disturbs the sympathetic nervous system and frequently there will appear a distant disorder of one or more ductless glands. Hyperthyroidism is not uncommon. Hypopituitarism is occasionally observed. Hypoadrenalism has been noted. It is not the writer's desire to enter into the possible mechanism of such complicated cases,—it is only to bring before your attention the value of that part of the human individual, the mind and its relation to the body.

Not long ago a young man of thirty-four years appeared for examination with the previous diagnosis of epilepsy. His first remark after the usual critical investigation was: "Don't tell me I am an epileptic." With fear and anxiety of again being grouped as an epileptic he describes his disorder. With increased fear he awaits the decision. What happens? Spell after spell occurred during the next fortnight, during which time biological, physiological and psychological tests were being performed. He was then told he was not an epileptic. Immediately a change in his whole make-up and as time went on, with the adjustment of his vegetative nervous system and the toning of his metabolism (if such a term may be used) his spells

decreased and finally disappeared. What was done for him was a balancing of his mental attitude along with the therapeutic measures.

Cannon, Crile, Stewart and others have given us their unbiased opinions upon the action of our emotions upon our nervous system and our glandular system. Why should one not keep such phenomena before one's attention when investigating these distinctly complicated and oftentimes serious disorders. Not taking these conditions into consideration has led many individuals to seek aid in exploiters of fancied cures only to reach a cure, real or apparent, because of the stress laid by these "cures" upon the psychic aim of medicine. True, it is hardly within the power of a clinician to go deeply into all factors, but it does seem wise in the face of the situation that in addition to the objective analysis of the case there should be an investigation into the personality or make-up and a determination of the individual's emotional level in order to arrive at the exact value of the pathological symptom-complex. He who takes the initiative in adopting such a procedure and putting it into practice will prove himself a real benefactor.

SOME RADICAL CHANGES IN THE TREATMENT OF DIABETES MELLITUS.

By FRANK T. FULTON, M. D.,
Providence, R. I.

The treatment of diabetes by fasting according to the method of Allen is now very well known. Allen arrived at his conclusions as to the best method of treating the disease by a prolonged careful and thorough experimentation on animals, chiefly on dogs. Up to that time he had had very little clinical experience. His arguments that he had a new and valuable method of treatment were so convincing that he secured the privilege of applying these principles to patients having diabetes in the Rockefeller Hospital where he had unrivaled opportunities and equipment.

This method of treatment which is now quite universally known consisted essentially of desugarization of the patient by means of a sufficiently long period of starvation and often by

subsequently maintaining this sugar-free condition by keeping the patient for a longer or shorter time in a state of undernutrition. The method was promptly accepted and taken up by other workers in this field, notably by Joslin and, with certain modifications has been the recognized method of choice up until about the present time. Joslin has been, perhaps, one of the most enthusiastic supporters of Allen and has always given him the fullest credit for this work. Joslin has modified the method to some extent—has not been so insistent upon complete fasting and in many instances now does not completely fast his patients at all. Instead he will deprive them of the fats of the diet, next of the proteids, and then allow them a diet of vegetables low in carbohydrates and in this way very commonly the patient is made sugar-free. About the same time it became the general practice to teach the diabetic to examine his own urine daily so that he would know promptly of the reappearance of sugar.

Altogether the method has been so easy of application that it has resulted in the popularizing the treatment of diabetes so that it has come to be considered very simple and as a consequence the diabetic is commonly treated by the physician who first discovers the condition. Mild cases are usually handled without much difficulty. The more severe ones, however, are likely to present a more or less complicated problem. The not infrequent termination of diabetes in a state of coma due to a development of an excess of non-volatile acids in the blood has instilled a very wholesome fear into the minds of medical men and while this complication is not so frequent as in the pre-fasting days, it is still the one particular thing which is dreaded by those who are treating the disease. It has been very universally taught that the source of the dreaded acids—B-oxybutyric and diacetic was fat and their appearance was because of its imperfect combustion and the warning against an excess of fat in the diet has been oft repeated. Given, then, a diet which is necessarily low in carbohydrates because of the inability to use carbohydrates and low in fats because of the danger of acidosis, there is left only the proteids which can be given in large quantity. In a

severe diabetic such a low carbohydrate and low fat diet is very likely to afford insufficient calories for a maintenance diet.

The recent publication of Newburgh of some clinical observations which he has made with the avowed purpose of determining just how much danger there was in the use of a high fat diet is of great interest. He reports seventy-three cases of true diabetes, all of them treated in the same general way with no selection of cases and most of them, according to his statement, being very severe. Instead of fasting he has adopted the routine of putting the patient at once on a high fat diet containing about 14 grams of carbohydrates, 10 grams of proteid and 90 grams of fat which will yield in the neighborhood of 900 calories.

As Newburgh states, the only satisfactory diet is one that will keep the patient sugar-free, that will prevent serious acidosis, and that will provide for his maintenance which means, first, that he gets energy value enough to carry on the ordinary activities of life and secondly, to keep the nitrogen balance. It is self-evident that if a diet averaging 900 calories will accomplish the same results as fasting that it is to be preferred. Newburgh maintains that that is what this high fat, low proteid and low carbohydrate diet will do. Of these seventy-three cases four died, none of the deaths, however being due to the diet. Newburgh was able in every instance to get the urine sugar-free on this diet and in no case was there developed an acidosis on account of the high fat. After the urine had been sugar-free for a week or two on this diet it would then be increased to about 1,400 calories consisting of about 20 grams of carbohydrate, 28 of proteid and 140 of fat. One very interesting and significant thing quite convincingly demonstrated by Newburgh was that patients who could not be made sugar-free by ordinary fasting would promptly become sugar-free when put upon this high fat diet.

At the recent meeting in Atlantic City there were several points brought out in connection with diabetes that make it easy to understand some of the apparent inconsistencies. It is now generally accepted by the chemists that a gram of proteid in its catabolism affords about 58% of carbohydrate and that from the remaining

part of the proteid there may develop the non-volatile acids. If a patient's daily metabolism is such that he requires a thousand calories and he is fasting it means that he is consuming of his body tissues enough to provide for himself the 1,000 calories. If he is a fat individual this may come largely from the fat tissue which is stored up in the body. If he is an emaciated individual it will come largely from the proteid and if, for example, a patient uses 100 grams of proteid from his own tissue during the twenty-four hours it means that he will have to burn in his body 58 grams of carbohydrate which comes from the proteid. A thin patient, then, who is fasting, may have to burn 50 to 60 grams of carbohydrate. If the patient has the ability to burn only 30 grams there will be about 20 to 30 grams eliminated in the urine. Now, if instead of fasting, this patient be given enough fat to supply the necessary calories so that the proteid of his body is spared, he will not have the 58 grams which come from his body proteid to consume and in that way he may promptly become sugar-free.

Palmer and Ladd of Johns Hopkins have during the last winter been experimenting on the carbohydrate-fat ratio which is safe to use in the treatment of diabetes and they have come to the conclusion that approximately a ratio of 1 gram of carbohydrate to 4 grams of fat is perfectly safe, that is, if the patient is able to take 50 grams of carbohydrate he may take 200 grams of fat. This proportion, they find, can be given without the production of the acid bodies. The advantage of this method of feeding a diabetic is that the patient may be kept on a diet which supplies the necessary calories and he is not losing either weight or energy and he is able to continue with his duties. Of course, there are severe cases of diabetes which are unable to burn much of any carbohydrate and those cases are hopeless cases. For example: If a patient could burn only 15 grams of carbohydrate it would mean according to that ratio of 1-4 that the safe limit of fat would be 60 grams. With a tolerance of 15 grams of carbohydrate this patient might take then 25 grams of proteid which would furnish the 15 grams of carbohydrate and he could also take 60 grams of fat. In this diet of proteid

and fat he would get about 640 calories. This, as is known, for an ordinary patient would be insufficient for a maintenance diet and the ultimate outcome of such a case would, of course, be fatal.

Another point which Newburgh strongly emphasizes is the importance of keeping the patient in nitrogen balance. It has been demonstrated and apparently with fair accuracy that one needs approximately 2-3 of a gram of proteid for every kilo of body weight in order to supply the necessary amount of nitrogen. For a patient weighing 110 pounds or 50 kilos, 34 grams of proteid would be necessary. Newburgh in his work has aimed to keep the proteid low, for besides the sugar which may be produced from the broken-down proteid substance it is now conceded that the acids may also be formed which go to bring about the condition of acidosis.

Woodyatt of Chicago, whose work on the chemistry of diabetes is of the highest order, emphasized the fact that one should always take into consideration the fact that a patient either fasting or on a diet below maintenance diet was always using of his own tissues and emphasized the fact that when body proteids were being broken down one should always estimate that more than half of that was going to form carbohydrate and that this carbohydrate must be burned by the patient. Woodyatt has recently been using the high fat diet and is now, instead of fasting his patients, as a rule, de-sugarizing them by giving them a diet of from 300 to 400 grams of 20% cream, which would be the equivalent to 60 or 80 grams of fat with the normal amount of proteid and carbohydrate in cream.

Dr. Joslin at this meeting cautioned about accepting this method of treatment without reservation saying that the duration of life of both diabetic children and adults who have been under his care since the fasting treatment has been in vogue and who have subsequently been maintained on a low diet has been materially increased. On that account he urges caution in any radical change in the method of treatment.

Allen also emphasized the fact that all patients were not alike, that their tolerance for carbohydrates would not be the same, that the susceptibility to acidosis was not the same in children

and old people, that over-nourished patients would not do so well as those in which the total calory intake was kept down.

Briefly stated, then, the changes in our ideas with regard to treatment of diabetes have to do largely with the fact that a high fat diet can be safely given in connection with low proteid and low carbohydrate. A very practical point would seem to be the fact that the carbohydrate-fat ratio which is safe is a fairly definite one, namely, 1 to 4. Another point is that in a fasting patient the tissues of the patient's body are being utilized and when the body proteids are being utilized that 58% of that produces carbohydrate which must be taken out in calculating and in figuring the patient's carbohydrate consumption.

Acting in accordance with the views which have just been outlined, we have lately treated a number of cases both in the hospital and in private practice and have found the method to be in the main eminently satisfactory. However, the words of caution which have been spoken by Joslin and Allen should be recommended to those who are treating diabetes. Until any new procedure has been in use a considerable length of time, one isn't always sure that there may not be certain unforeseen difficulties or disadvantages develop.

RESULTS OF THE TREATMENT OF SYPHILIS IN MENTAL CASES.*

By HAROLD I. GOSLINE, M. D., *Pathologist*,
State Hospital for Mental Diseases, Howard, R. I.

I have purposely used the words, "syphilis in mental cases" to avoid the dilemma of having to explain how the mental disease is produced by the syphilis. We do not know that, though evidence is fast accumulating which goes to show that syphilis may produce mental disease and though it is pretty generally accepted by all classes of physicians now, that syphilis does produce that form known as paresis. Again I am not so certain that all the cases that have been treated here and which have been grouped in this paper are really cases suffering with syphilis, for it has several times been necessary to

*Read before the Meeting of the Rhode Island Medical Society held at the State Hospital for Mental Diseases, Howard, R. I., September 1, 1921.

make the diagnosis on the laboratory findings alone. Or, rather we may say that the laboratory findings were taken as evidence without the clinical evidence and we went ahead and treated as if we were dealing with syphilis and now we have the results. I give you these statements by way of introduction. The material will best be presented by following the same plan. That is to say, the undoubted cases will be presented first and then the doubtful cases.

Of the undoubted cases of syphilis, there are grouped in this study fifty patients. These are accepted both on the mental side and on the laboratory side as the following chart will show. (Chart 1). Of these patients, eleven are now dead. One case was given only one treatment and at the time he was practically moribund. He died the following day. If we omit him from our list of fatalities in spite of treatment, we find that an even 20% are dead. Three are on parole, two of these against advice and the third one returns weekly for treatment. In other words, in advanced cases we have thus far 20% mortality and no remissions though under persistent and regular treatment. There are several things that we may conclude tentatively from these facts. In the first place our method of treatment may not be intensive enough. Certain of my colleagues recommend treating cases of neuro-syphilis twice a week without intermission until they improve or give evidence that the treatment should be discontinued. They have never published results showing their mortality. On the other hand they have published a number of instances where the patient is back at his work and has been so for several years (Chart 1). In general, our cases are later ones than those, for those cases were seen at a Psychopathic Hospital and ours are all committed cases. However, to outline our method of treatment briefly, I would say that it was originally that recommended for the use of the United States Army (Chart 2). We have since omitted the use of mercury. We originally gave salts, omitted food before and after treatment, putting the patient to bed till the following morning. Now we do none of those things and the patients stand the treatment better. We have used only the one drug, neoarsphenamine, in the proportion of 0.15 gm. to 30 lbs. body weight. This is

administered weekly and is given intravenously in sterile distilled water, the strength being 0.03 gm. to every ml. Thus patients of 150 lbs. body weight receive 25 c. c. of solution which contains 0.75 gm. of the drug, or in other words 0.15 gm. per 30 lbs. body weight. Larger doses than this are not well-borne and even with this dosage I have had five cases of exfoliative dermatitis, one case of eczema and one of jaundice in 134 patients, a percentage of five. We continue this treatment for a period of ten weeks, followed by a rest period of four to six weeks. We then take specimens of the blood and spinal fluid again and repeat the course of treatment if the results of these examinations warrant.

Another reason for our apparent lack of success with these patients may be that the drug is not effective. It is now certain that Ehrlich's original claims of a *dosis magna sterilisans* was a false dream. On the other hand, I am not prepared to say on the evidence of a comparatively short period of treatment of a small number of cases, that treatment is wholly without benefit, especially when there is abundance of evidence that the drug is efficient in early cases and when some workers claim benefit from its use even in cases such as we are treating here. We must go on treating our cases longer. This we are doing with the hope that prolonged treatment may do what intensive treatment is claimed by some to do. Perhaps we shall have to use other criteria of the force of the drug than the mere regard of an increase in the remission rate or a diminution of the death rate. We may have to use the length of life or more likely the time spent in hospital as the real criterion. If life is longer in treated than in untreated cases, this would speak for the efficacy of the drug. If hospitalization is decreased, that would point in the same direction.

Another assumption is open to our logic to explain our lack of success in treating these patients. That is, that our cases are too far advanced. Every one of these patients who is aware that he or she has ever had syphilis at all, places the date of infection a goodly number of years back. The active mental symptoms in some cases are of several years duration. In others they are only of a few months duration. In any instance the damage might have been

discovered years ago before the onset of mental symptoms by the simple procedure of lumbar puncture. Every patient with lues should be subjected to this procedure before he is pronounced well by the physician who is treating him. Many cases will thus be saved the danger of coming to us in the advanced stages, in which we get them.

There is another comparison which I wish to make in these advanced cases because some of them have had only a few treatments while others have had many. There are twenty cases here who have had three courses of treatment of the duration, intensity and regularity outlined above. Not one has left the hospital. There are eight cases that have received two courses. Of these, three are dead, one has exfoliative dermatitis, one is on parole, but returns for treatment and is really not fit to be at home. She is allowed home as special care is taken of her there. We have fourteen cases that have had one course only. Of these five are dead and one is on parole, but returns for treatment weekly. Seven cases have had less than one course of treatment; three are dead and one is on parole against advice. These results, while interesting when presented in tabular form, really mean nothing because they represent such small numbers. Hence they cannot be a basis for any comparison. We can only say that in this class of cases the clinical result at the present time is not encouraging. On the other hand we must now consider the laboratory result. In the first place our work corroborates that of other writers who report their most constant result to be a reduction in the cell count; we note the same phenomenon. On the other hand we find that the type of gold sol. curve means nothing unless you can conceive that the disease may in a period of fourteen weeks change from a parenchymatous type to a meningo-vascular type and then back again in another fourteen weeks as it must have done in some of our cases, if we are to rely on the evidence of the gold sol. It is stated that the gold sol. depends on globulin. That is not certain, but whatever it depends on, it is inconceivable for any one familiar with pathology that a process should attack only cells and not supporting tissue, and this becomes all the more inconceivable when

he thinks of the syphilitic process. It is still more doubtful that the globulins or what not, from the cell should be of such a different chemical constitution that they give a 5,555,000,000 reading, while those from the supporting tissues give a reading 3,455,552,200. The idea is preposterous, yet that is the very thing that has been claimed for the gold sol. It is little wonder that the gold sol. attracted so much attention; it was indeed a wonderful fluid. And to shroud it in still deeper mystery, the directions for making were mysterious leaving the novice to infer that under identical conditions its manufacture was sometimes successful, sometimes not. This of course would refute the very principles of science, but that was not realized by the short-sighted. I do not wish to discourage the use of the gold sol. I only wish to obtain a common sense view of this reagent. It is valuable in showing abnormalities of the spinal fluid and in certain zones those abnormalities probably mean syphilis if they are sufficiently marked. Beyond this point we cannot go at the present time in the interpretation of the gold sol.

The theoretical aspects of these matters might be discussed at considerable length. The practical aspect can be stated in a few words, namely, that there has been no essential change in the laboratory findings in any case whether the duration of treatment was one, two or three courses.

To turn to those cases that are mentally not paretic. In our survey of the hospital we found a number of cases that had positive Wassermann reactions on the blood or spinal fluid, or other evidence of syphilis. We took these cases up for study to determine if the findings which we had and which were generally weak or equivocal, meant anything and also to determine if treatment might improve the mental condition as it was reported to improve the physical condition of syphilitics.

The following table will present the clinical diagnosis and laboratory findings in these cases. (Chart II.)

We have also divided these cases into those who have received three courses, two courses, one course and less than one course of treatment. I will not stop to analyze these groups separately as the result is of no apparent value. Suffice it to say that practically all these cases

become completely or practically negative after at most three courses of treatment. Clinically they do not change or at least not radically so. I am sorry that we have been unable to examine each case minutely on the mental side before this meeting to determine whether symptoms previously present have dropped out or not. But I may say that there has been no radical change in most cases such that the Ward Physician is suggesting to the relatives that the patient might go home. As a matter of figures, out of eighty-four patients considered here, ten are now on parole. However only two have died. This makes 12% on parole as compared with none in the group of paretics and only 2% of deaths as compared with 20% in that group. If their disease is due to syphilis or if syphilis plays any part in it, the syphilis must be much less severe than in the former group.

Finally, on theoretical grounds, I wish to throw doubt on the idea that these patients are syphilitic at all. (There are a few exceptions as you will see by glancing at the table.) The ground that I wish to take my stand on is the nature of the Wassermann reaction. Clinically, the reaction is of inestimable value because the relatively few things that may give a false positive can easily be excluded. On the other hand every laboratory worker knows that the test is not specific for syphilis. It is specific for certain alcohol soluble lipoids and nothing else, probably. Now it appears that these lipoids may be present in the blood serum of non-syphilitics at times and that they may be picked up by the Wassermann reaction especially if a cholesterinized antigen is used. It is certainly true in this laboratory that we have not had nearly so many doubtful reactions since using a straight alcoholic extract as antigen. Doubtless we miss

some weak positives but that is neither here nor there. I do not believe that we are calling any one syphilitic who is not really so.

Patients with weak positives with special antigens and with those other equivocal signs in the spinal fluid are suffering from some organic disease, I feel perfectly certain. That its nature is unknown to us, I feel just as sure. That it is of syphilitic origin is still in doubt in my mind. Certain it is that treatment *per se* has not effected results. Perhaps the next step in these cases is to combine this sort of therapy with some other form. I do not know.

In concluding let me say that we are not discouraged with regard to salvarsan therapy in late cases. We are going on with the treatment. I would not have any one who is doing this work outside go away from here with a pessimistic feeling. We have only twenty cases in which three courses have been given. Our therapy has not been as intensive as elsewhere.

On the other hand, I would urge everyone who has anything to do with this problem to take every means to insure a complete and permanent cure in every case that falls into his hands to the end that late stages may not occur. A lumbar puncture should always be performed before the patient is finally discharged. Late stages mean added complication, less in hope, human wrecks. Advise patients who have had as you suppose adequate treatment, to have their blood tested at least once a year regularly throughout their prime.

And more important than all therapy, lend your aid to the prevention of this scourge whose ravages extend far beyond the bounds of medicine into the social, economic, legal and emotional aspects of human life.

CHART I

CASE DIAGNOSIS		WR — bl.	CELLS	RJ	NOG	ALB	WR												1	2	3	4	5	6	7	8	9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
11213	Paresis	Two plus	40	All tests	double plus																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

11569	Paresis	Two plus	131	All tests double plus				2	3	4	5	5	5	5	5	5	5
11295	Paresis	Two plus	20	Not done	Two plus	Plus	Two plus	Not done									
10518	Paresis	Two plus	12	All tests double plus				5	5	5	0	0	0	0	0	0	0
12033	Paresis	Two plus	Bloody	Plus	All double plus			0	5	5	5	5	5	5	5	3	2
11870	Paresis	Negative	15	Plus	Plus		Double plus	5	5	5	5	5	5	5	3	3	3
11828	Paresis	Negative	23	Plus	All double plus			5	5	5	5	5	5	5	5	3	2
11414	Paresis	Two plus	12	All one plus			Two plus	5	5	5	5	5	5	5	5	5	5
11962	Paresis	Plus	12	Plus min.	Neg.	Neg.	Plus	0	1	1	1	5	2	0	0	0	0
11859	Paresis	Plus	33	Plus	Plus min.	Plus	Two plus	5	5	5	5	5	5	5	3	0	0
10766	Paresis	Two plus	76	All tests double plus				Not done									
11845	Paresis	Two plus	153	Plus	All double plus			4	5	5	5	5	5	5	5	4	3
11335	Paresis	Two plus	28	Not done	All double plus			Not done									
11315	Paresis	Two plus	110	Not done	All double plus			Not done									
11702	Paresis	Two plus	Bloody	Plus	All double plus			2	3	4	5	5	5	5	5	5	5
11729	Paresis	Negative	15	Plus	Two plus	One plus		1	5	5	5	5	5	4	4	3	2
9982	Paresis	Two plus	77	All tests double plus				5	5	5	5	0	0	0	0	0	0
11931		Two plus	37	Plus min.	All tests one plus			0	1	2	3	3	3	2	2	0	0
11166	Paresis	Two plus	37	All tests double plus				Not done									
11843	Paresis	Two plus	Bloody	Plus	All double plus			4	5	5	5	5	5	5	5	4	3
11475	Paresis	Two plus	Bloody	All tests double plus				1	1	2	3	3	4	4	4	5	5
11032	Paresis	Two plus	12	All tests double plus				Not done									
11669	Paresis	Negative	4	Two plus	Plus	Two plus		2	3	4	5	5	5	5	4	2	4
9937	Paresis	Two plus	Not done	Plus	All double plus			2	3	5	5	5	5	3	5	5	2
11552	Paresis	Two plus	Bloody	All one plus			Two plus	4	4	4	3	3	3	4	4	4	2
11689	Paresis	Two plus	29	All one plus			Two plus	2	3	3	4	4	5	5	5	4	4
11339	Paresis	Two plus	40	All tests double plus				Not done									
12054	One plus																
12054	Paresis	One plus	43	All tests double plus				4	5	5	5	5	5	5	5	2	1
11532	Paresis	Two plus	50	All tests double plus				2	2	3	4	4	4	4	4	4	4
11913	Paresis	Negative	171	All one plus			Two plus	2	3	4	4	4	5	5	5	3	3
11103	Paresis	Two plus	18	All tests double plus				Not done									
10218	Paresis	One plus	38	All tests double plus				5	5	5	5	0	0	0	0	0	0
11927	Paresis	Two plus	95	All tests double plus				5	5	5	5	5	5	3	0	0	0
11418	Paresis	Two plus	16	All tests double plus				1	2	3	4	5	5	5	5	5	4
11534	Paresis	One plus	160	All tests double plus				1	2	3	4	4	4	4	4	4	4
11468	Paresis	Two plus	77	All one plus			Two plus	1	2	2	3	4	3	2	2	1	1
11630	Paresis	Two plus	7	All tests double plus				3	3	5	5	5	5	5	5	5	5
11662	Paresis	Negative	23	All one plus			Two plus	2	2	2	3	3	3	4	4	2	2
11412	Paresis	Two plus	Bloody	All tests double plus				2	3	4	5	5	5	5	5	5	4

CHART II

11061	D. P.?	Two plus	73	Neg.	Neg.	Plus min.	Neg.	0	0	1	2	2	0	0	0	0	0
9526	D. P. par.	Two plus	21	All tests double plus				Not done									
11751	Paresis	Negative	1	Neg.	Neg.	Plus min.	Neg.	0	1	2	2	1	1	0	0	0	0
11976	Paresis	Negative	b1	All tests negative				0	0	2	3	3	3	1	0	0	0
11705	Paresis	Negative	b1	All tests negative				0	0	2	3	3	3	1	0	0	0
9883	D. P. par.	One plus	0	All tests negative				0	1	2	2	0	0	0	0	0	0
10405	D. P. par.	Two plus	2	Neg.	Plus min.	Plus	Neg.	0	0	1	2	2	0	0	0	0	0
8774	Korssakow	Two plus	1	Neg.	Plus min.		Neg.	0	0	1	1	2	0	0	0	0	0
11206	D. P. par.	Two plus	few	Neg.	Neg.	Two plus	Neg.	Not done									
10696	Organic	Two plus	8	Plus min.	Plus	Plus	Neg.	0	0	0	1	1	0	0	0	0	0
9556	D. P. par.	One plus	1	Plus min.	Neg.	Plus min	Neg.	0	0	1	2	2	0	0	0	0	0
11543	G. P.	Negative	28	Plus min.	All one plus			1	2	3	3	3	3	2	1	0	0
11217	G. P.	Negative	12	Not done			Neg.	Not done									
11830	M. D. mixed	Negative	1	Plus min.	Plus	Two plus	Neg.	0	0	1	2	4	2	2	1	1	0
11892	Undeterm.	One plus	40	Neg.		One plus	Neg.	0	0	1	2	2	1	1	0	0	0
10330	Undeterm.	Negative	few	Neg.	Neg.	Two plus	Neg.	0	0	0	0	0	0	0	0	0	0
11106	D. P. hebe.	Two plus	3	Neg.	Plus	Two plus	Neg.	0	0	2	3	2	2	2	1	0	0
11415	D. P. hebe.	One plus	Cells	and chem.		Not done	Neg.	Not done									
10222	D. P. hebe.	One plus	B1	Neg.	Neg.	Plus	Neg.	0	0	1	3	3	1	0	0	0	0
7508	D. P. hebe.	One plus	2	Neg.	Plus min.	Neg.	Neg.	1	1	3	3	3	3	2	2	1	1
11431	Undeterm.	Negative	B1	Plus min.		Neg.	Neg.	0	2	4	5	5	5	4	1	4	4
11227	D. P. par.	Two plus	3	Neg.	Plus	Plus	Neg.	Not done									
11811	D. P.?	Plus minus	1	Neg.	Neg.	Plus min	Neg.	0	1	3	4	4	3	2	2	0	0
11031	D. P. par.	Two plus	1	Plus min.	Plus	Plus	Neg.	0	0	1	2	2	2	1	1	0	0
8971	Epilepsy	Two plus	3	Plus	Two plus	Neg.	Two plus	Not done									
10623	D. P. hebe.	One plus	2	Neg.	Plus	Plus	Neg.	0	1	2	3	3	3	2	0	0	0
10626	Epilepsy	One plus	2	Neg.	Plus min.	Plus	Neg.	0	0	1	2	3	3	1	0	0	0
9969	D. P. par.	Two plus	few	All tests negative				0	0	0	0	0	0	0	0	0	0
10040	D. P. par.	Negative	1	Neg.	Plus min.		Neg.	1	2	3	3	3	3	2	2	1	1
9588	Undeterm.	Two plus	72	All tests double plus				3	4	4	3	2	1	0	0	0	0

11168	Ac. alc. hall	Two plus	few	Neg.	Neg	Two plus	Neg.	Not done										
8838	M. D. mixed	Negative	2	Neg.	Plus	Plus	Neg.	0 0 0	1	2	1	1	0	0	0	0		
11628	Undeterm.	Negative	bl	Plus min.		Neg.	Neg.	2 2 2	3 3 3	2 1 1	1 1 1							
11659	Paresis	Negative	bl	Neg.	Plus min.		Neg.	0 0 2	2 3 2	1 1 0	0 0 0							
10521	Undeterm.	Two plus	8	All tests	double plus			0 2 2	2 0 0	0 0 0	0 0 0							
11326	D. P. par.	Two plus	0	Not done	Neg.	Neg.	Neg.		Not done									
10018	D. P. par.	Two plus	22	All tests	double plus			3 4 4	4 0 0	0 0 0	0 0 0							
11915	Undeterm.	Plus min.	1	Neg.	Neg.	Neg.	Neg.	0 0 1	1 2 2	1 1 1	1 1 1							
10213	G. P.	Negative	24	All two plus				Plus	Not done									
11822	D. P. cat.	Plus min.	bl	Plus min.		Plus	Neg.	0 1 2	3 3 3	3 1 1	1 1 0							
11657	D. P. par.	Plus min.	bl	Neg.	Neg.	Neg.	Plus min.	1 2 3	3 3 2	1 1 0	0 0 0							
9745	Paresis	Two plus	11	All double	plus		Neg.	0 1 1	1 0 0	0 0 0	0 0 0							
11692	C. P. I.	Negative	0	Neg.	Plus min.		Neg.	1 2 3	2 2 2	1 0 0	0 0 0							
8511	D. P. par.	Negative	bl	Neg.	Plus	Plus	Neg.	0 0 2	3 3 3	2 1 0	0 0 0							
11835	Paresis			Neg.		Neg.	Neg.	0 1 3	2 2 1	0 0 0	0 0 0							
11394	D. P. par.	Two plus	Not done	Not done	Plus	Neg.	Neg.		Not done									
11791	Ac. alc. hall	Two plus	0	Neg.	Neg.	Neg.	Neg.		Not done									
9718	D. P. cat.	Plus min.	bl	Neg.	Neg.	Neg.	Neg.	2 3 3	3 3 3	2 1 1	1 1 1							
11527	D. P. hebe.	Two plus	4	Neg.	Neg.	Neg.	Neg.	1 1 2	3 3 2	2 1 1	1 1 1							
11910	Paresis	Two plus	bl	Neg.	Neg.	Neg.	Neg.	0 1 2	3 3 3	2 1 1	1 1 0							
9441	D. P. cat.	One plus	1	Neg.	Neg.	Neg.	Neg.	0 1 2	3 3 3	3 1 0	0 0 0							
9888	M. Def.	Plus min.	9	Plus min.		Neg.	Neg.	1 1 2	3 3 3	2 2 1	1 1 1							
10013	Korssakow	One plus	bl	Neg.	Plus min.		Neg.	0 0 2	3 3 2	0 0 0	0 0 0							
9849	M. D. mixed	Plus min.	bl	Neg.	Neg.	Neg.	Neg.	0 1 2	2 2 2	1 1 1	1 1 0							
9910	D. P. par.	One plus	8	Neg.	Neg.	Plus min.	Neg.	0 2 2	2 1 1	0 0 0	0 0 0							
8216	D. P. hebe.	One plus	1	Plus	Plus	Plus min.	Neg.	0 0 1	3 3 3	1 0 0	0 0 0							
11581	Paresis	Negative	11	Neg.	Plus	Plus	Neg.	1 2 3	3 3 3	2 1 1	1 1 1							
8563	D. P. hebe.	Plus	1	Neg.	Plus	Plus	Neg.	0 1 3	3 3 2	1 0 0	0 0 0							
11597	Undeterm.	Negative	1	Neg.	Neg.	Neg.	Neg.	1 2 3	3 3 2	2 1 1	1 1 0							
8866	M. D. man.	Two plus	bl	Neg.	Plus min.		Neg.	0 3 4	3 2 2	0 0 0	0 0 0							
9904	Undeterm.	Two plus		Other tests not done owing to spinal disease.														
11185	D. P. hebe.	Two plus	1	Not done	Neg.	Neg.	Neg.		Not done									
8567	M. D. mixed	Plus min.	1	Neg.	Plus min	Neg.	Neg.	0 1 3	1 2 2	1 0 0	0 0 0							
10757	M. Def.	Two plus	2	Neg.	Neg.	Neg.	Neg.		Not done									
10672	Alc. par.	Plus	1	Neg.	Plus min.		Neg.	1 1 2	3 3 3	2 1 1	1 1 1							
9212	Paresis	Two plus		Other tests not done														
10689	D. P. hebe.	One plus	?	Neg.	Plus	Plus min.	Neg.	0 1 2	3 3 2	2 1 0	0 0 0							
9124	D. P. hebe.	Two plus	0	Neg.	Neg.	Plus	Neg.		Not done									
10406	Inv. Melan.	Plus min.	1	Neg.	Plus	Neg.	Neg.	0 1 2	2 1 1	0 0 0	0 0 0							
8967	D. P. hebe.	Two plus	6	Neg.	Two plus	Neg.	Neg.		Not done									
8776	D. P. cat.	Plus min.	1	Neg.	Neg.	Neg.	Neg.	0 1 2	2 2 1	1 0 0	0 0 0							
10432	D. P. par.	Negative	1	Neg.	Plus min.	Neg.	Neg.	0 0 2	3 3 1	1 1 1	0 0 0							
11046	D. P. par.	Negative	0	Neg.	Neg.	Neg.	Neg.		Not done									
11617	Paresis	Negative	1	Plus min.		Plus	Neg.	1 1 2	3 3 3	3 3 3	2 2 2							
9983	M. D. man.	Plus	2	Neg.	Plus min.	Neg.	Neg.	0 0 0	2 2 2	1 0 0	0 0 0							
11388	D. P. par.	One plus		Not done	Plus	Neg.	Neg.		Not done									
9546	D. P. hebe.	Two plus	8	Neg.	Neg.	Plus min.	Neg.	0 1 2	3 3 1	0 0 0	0 0 0							
9926	Ac. alc. hall	Two plus	8	Neg.	Neg.	Plus min.	Neg.	0 1 2	3 3 1	0 0 0	0 0 0							
11671	Paresis	Negative	1	Neg.	Neg.	Neg.	Two plus	1 2 3	3 3 3	3 2 0	0 0 0							
10603	D. P. par.	Two plus	2	Neg.	Plus min	Neg.	Neg.	0 1 2	2 2 1	1 1 1	1 0 0							
8240	D. P. par.	Two plus	bl	Neg.	Neg.	Plus min.	Neg.	0 0 2	2 2 1	0 0 0	0 0 0							
10458	D. P. par.	Negative	1	Neg.	Neg.	Neg.	Neg.	0 0 2	2 2 1	0 0 0	0 0 0							
11722	D. P. par	Two plus	0	Neg.	Neg.	Neg.	Neg.	1 2 3	3 3 2	2 1 1	1 1 0							
9135	D. P. hebe.	Two plus	few	Neg.	Neg.	Plus	Neg.		Not done									

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(Continued on page 155)

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PAWTUCKET

Meets the third Thursday in each month excepting July and August

E. J. MATHEWSON	<i>President</i>	Pawtucket
CONRAD E. THIBODEAU	<i>Secretary</i>	Pawtucket

PROVIDENCE

Meets the first Monday in each month excepting July, August and September

FRANK T. FULTON,	<i>President</i>	Providence
P. P. CHASE	<i>Secretary</i>	Providence

WASHINGTON

Meets the second Thursday in January, April, July and October

PATRICK J. MANNING	<i>President</i>	Wickford
W. A. HILLARD	<i>Secretary</i>	Westerly

WOONSOCKET

Meets the second Thursday in each month excepting July and August

ROBERT G. REED	<i>President</i>	Woonsocket
THOMAS F. BAXTER	<i>Secretary</i>	Woonsocket

EDITORIALS

OUR BUSINESS MANAGER.

While the Publication Committee of the RHODE ISLAND MEDICAL JOURNAL is fortunate in securing Dr. Buxton as the new business manager, it is with distinct regret that we chronicle the retirement of the recent incumbent. Dr. Risk, showing always a profound and active interest in the affairs of the society in its entirety, demonstrated particular capacity in the business management of this publication.

Probably never has it been upon a more satisfactory financial basis or more select in the class of advertisers. Conscientious and strict business integrity have marked his labors, which have often been trying.

Wherever he may go, he takes with him the compliments of this committee and its best wishes as well, we venture to say, of the society as a whole.

We greet the incoming manager in full confidence, however, being well aware of his many capabilities and rest content in this faith.

"IT IS THE HAND OF ESAU."

It comes within the range of possible conjecture that the science (*sic*) of chiropractics has some helpful use, either mental or physical—probably the first—upon the health of some people of certain temperament. It is beginning to be apparent, however, that the "Reign of Reason" is gaining the ascendancy over the "Rain of Dollars," heretofore enjoyed by this particular cult, and that their star of popularity is on the wane.

Nevertheless an intensive campaign is being instituted, or rather revamped, to endow these people with all the equipment necessary to make them practising physicians in the eye of the law.

Time was, when medicine was considered one of the learned professions, and if we are somewhat jealous of our heritage, in consideration of the many and trying preliminary educational requirements necessary to the degree of M. D., we may be excused if we do entertain a certain reluctance toward welcoming this cult, whom we believe to be scientifically immature, uneducated, unqualified and always inefficient into full fellowship.

But the offense to our dignity and to our medical standards is as nothing as compared to the offense to common intelligence when legislative bodies seriously consider the placing of the profession of medicine and chiropractics upon the same basis.

From an advertising booklet printed in Davenport, Iowa, a series of letters, etc., entitled "Opinions of well known medical men and osteopaths regarding chiropractics," illuminated by misspelled words and ungrammatical language, we offer a few quotations: "I have practiced chiropractic almost exclusively now for nearly two years and never lost a case—so far this month I have given 419 adjustments. I have obtained most wonderful results in both acute and chronic diseases: notably in appendicitis, rheumatism, constipation, stomach and kidney troubles, goiter, insomnia, anterior polio-myelitis, headaches and the pelvic diseases peculiar to women."

Again, " * * * one can appreciate why it is the allopathic doctor meets with failure so frequently; with all his pretensions to superiority he is sadly handicapped, because of gross ignorance concerning the spine and its relationship to

disease. * * * His mental attitude of superiority is based upon ignorance, arrogance, and pretense, * * * a pretender. A pretender is a quack and has no right to ask the confidence or respect of the community; his pretensions are a positive menace to the community, and the world would be better off without him."

These and other equally courteous remarks tend to cheer and amuse our leisure moments.

Absurd? Of course! These people came before our legislatures under an imitation and soiled mantle of savants; but their attitude appeals to us as that of plunderers.

And the crowning absurdity of it all, is the necessity for physicians to go before these legislators year after year to protect—not the profession, but public health itself against this type of money-getters.

"DOCTOR AND NURSE."

Speaking to the graduating class of nurses of the Johns Hopkins Hospital, just thirty years ago, the late Sir William Osler, in an address that is a literary gem, told the young women about to enter on their life work of the place they, as fully trained nurses, were to occupy in the world; he emphasized the honorable nature of their ancient calling,—a calling more ancient, "and, as older, more honorable" than the profession of medicine itself.

Of the relation of doctor to nurse in the hospital ward and in the home, that relation which, like a happy marriage, should be a perfect example of "team work," Osler said but little. That was thirty years ago. Present day experience suggests that much might be said. To say that the modern doctor is often guilty of assuming an air of superiority to the nurses with whom he works, to say that his attitude is at times ungallant, even discourteous, is, it is to be feared, to speak the truth. Doctor and nurse alike, as Osler puts it, are often but "useful supernumeraries in the battle, simply stage accessories in the drama" and the final outcome is at times far more dependent upon the skill, patience and resourcefulness of the nurse than upon any wisdom that the doctor may possess. The special training of the nurse enables her to carry out with surpassing skill the difficult and tedious procedures incident to bedside care.

Her relation to the patient and the family is most intimate, and on her tact, kindness and optimism the ultimate issue may rest. Any suggestion of lack of confidence in her work on the part of the physician may seriously injure the morale of patient or family, and the slightest approach to open criticism is a glaring error in judgment, as well as a flagrant breach of etiquette that is quite inexcusable. The wise physician invites suggestions from his nurses, knowing full well that they are the best of critics of the treatment he prescribes, and in turn gives them suggestions as to their work in a spirit of earnest co-operation that can not be misinterpreted.

MEDICAL ETHICS.

To most members of our profession, medical ethics is a term that has rather an indefinite meaning. It has even happened that in the keen competition that exists among the physicians in a community medical ethics have been temporarily forgotten or misplaced. That it is most important to have a code of ethics in the medical profession has been accentuated by a recent Supreme Court ruling in Massachusetts, delivered by Chief Justice Rugg.

A physician had been summoned to appear before the State Board of Registration in Medicine because he was suspected of gross misconduct and his lawyer asked for a stay of proceedings on the ground that the authority of the State Board ended with the granting of the medical certificate. This petition was refused by the Supreme Court and it was held that the State Board had authority to revoke or cancel a certificate for just cause after due hearing.

The section of the decision that emphasized the necessity of a code of ethics contained the following significant sentences:—"Soundness of moral fibre to insure the proper use of medical learning is as essential to the public health as medical learning itself. Highly trained intelligence combined with a disregard of the fundamental virtues is a menace. Mere intellectual power and scientific achievement without uprightness of character may be more harmful than ignorance. A physician, however skillful, who is guilty of deceit, malpractice or gross misconduct in the practice of his profession well may be

thought to be pernicious in relation to the health of the community."

"POST-GRADUATE MEDICAL EDUCATION AT HOME."

A high standard of medical practice is to a great extent determined by the near-by presence of a medical school. In recent years a large number of these schools have instituted post-graduate courses in various subjects and to attend which physicians travel long distances and spend some months time and much money. These schools are of immense value and are destined to be the most important factor in keeping physicians professionally fit and affording opportunity for education in the specialties.

But it is not possible for all physicians to take advantage of such opportunities for financial reasons. Especially is this true in a state where there is no medical school. But is it not reasonable to expect the hospitals to some extent to meet the deficiency in medical education, for they can impart some of the stimulus which the presence of a medical school would certainly furnish.

The open hospital is not a solution of this problem. In a few western cities all physicians are privileged to send to them and treat their cases, but it is not a success either from the standpoint of the hospital nor patient. To throw open the hospital to all doctors regardless of their qualifications would appeal to anyone as neither logical or safe. But those men who are on the staff of our hospitals owe it to their brother practitioners and themselves to do some teaching.

In Rhode Island for instance there is no medical school. A few conscientious men go to Boston for courses but many cannot do this. Is it not possible for the State Society to ask the hospitals of Providence to hold medical and surgical clinics. By the appointment of a joint committee of the society and the hospitals a schedule of clinics to extend throughout the year could be arranged and the subjects, time of the clinics could be printed and distributed to the practitioners of the state.

It is not expected that there would be any large number of physicians attending each clinic. In fact it is far better for the man conducting

the clinic to have only one or two men to whom to demonstrate a case or an operation. Such a series of clinics would not only be of help to outside practitioners but of very much help to the men who conduct the clinic and improve the grade of work done by the hospitals.

SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION

The regular monthly meeting of the Providence Medical Association was called to order by Dr. Frank T. Fulton at 8:50 P. M., on May 2, 1921, at the Medical Library.

The records of the last meeting were read and approved. The Standing Committee having approved the application for membership of Dr. Eric Percy Stone the Secretary was empowered to cast one ballot for his election.

The President announced that the amount of money asked from the members of this society for helping defray the expenses of the A. M. A. meeting in Boston had been generously over-subscribed.

Also that the June meeting of the Society would conflict with the Boston meeting of the A. M. A. and asked for the sense of the Society. On the motion of Dr. Mowry it was voted that the next meeting of the Society be held on the first Monday in October, 1921.

The discourse of the evening was given by Dr. William R. P. Emerson of Boston, Mass., on the Underweight Child, this being illustrated by many excellent lantern slides showing charts, campaign material and photographs of children. Dr. Emerson insisted that when children were beneath the proper weight for their age and measurements, the causes should be sought for by physical examinations, histories and studies of the conditions under which they live. He illustrated many of the problems and the methods employed, emphasizing the nutrition classes and clinics.

The talk was discussed by Drs. Utter, Calder and Washburn and Miss Cummings, Nutrition Worker for the R. I. Co-operative Nutrition League.

On the motion of Dr. Leonard it was voted that the collation money saved by omitting the

June meeting should be given to the Chinese Famine Fund.

The meeting adjourned at 10:10 P. M. Attendance—seventy-four members and twenty-one guests. Collation was served.

Respectfully submitted,

PETER PINEO CHASE, *Secretary*.

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly Meeting was held at the Colonial Club, Westerly, Thursday, October 13, 1921, at 11 A. M. Paper: Radium and Skin Diseases, Dr. Carl D. Sawyer, Providence.

W. A. HILLARD, M. D., *Secretary*.

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The annual meeting of the Rhode Island Ophthalmological and Otological Society was held at Camp Cyril Henius, Quonset Point, on Thursday, September 15, 1921, with a large attendance present.

The program of the day consisted of Sports from 2 to 5 p. m.; Dinner at 5 p. m., and election of officers at 7 p. m.

The officers elected for the ensuing year were: President, Dr. C. J. Astle; Vice-President, Dr. H. E. Blanchard; and Secretary-Treasurer, Dr. J. L. Dowling.

Meeting adjourned at eight o'clock.

J. L. DOWLING, M. D., *Secretary*.

HOSPITALS

PROVIDENCE CITY HOSPITAL.

Dr. Earl A. Bowen completed a three months service on October first, when he begins his internship at the Rhode Island Hospital.

The regular meeting of the Staff Association was held at the hospital on the evening of September 21st.

MEMORIAL HOSPITAL.

The annual meeting of the Memorial Hospital Staff Association was held at the hospital October 4, 1921, at 8:45 p. m. The following officers were elected:

President—Dr. Roland Hammond.

Vice-President—Dr. James L. Wheaton, Jr.

Secretary—Dr. John J. Kenney.

Treasurer—Dr. Lambert Oulton.

BOOK REVIEW

DISEASES OF CHILDREN.

HERMAN B. SHEFFIELD, M. D.

C. V. Mosby Co., Publishers.

Dr. Sheffield has written an extremely scientific and complete text book on the diseases of children. It is written in accordance with the latest advances in medical research and very little of importance has been omitted. The first chapter on prevention and control of disease is an unusual feature and gives a simple and logical arrangement for the material.

The chief fault that is noticed is that in the effort to crowd so much material into an 800 page text book, certain subjects are treated so briefly that an erroneous impression is given. For instance on page 75 the reader understands that 4,000 units of antitoxin is sufficient for an "ordinary" case of diphtheria in an infant of two years, and on page 305 the student gains the impression that in otitis media it is just as well to let the drum rupture spontaneously. There are, as is always the case in a pediatric text book, many statements that could be made the subject of controversy, but in general Dr. Sheffield has taken a position that can be well defended.

MISCELLANEOUS

VETERINARY CHIROPRACTIC.

And now the lower animals are to be "adjusted!" The house organ of a brand of chiropractic dispensed from Davenport, Iowa, prints letters from some of its "graduates" describing wonderful results attained in the "chiropractic treatment" of sick animals. One enthusiastic Georgia chiropractor relates that when he "was adjusting Henry Vinson's son of an inco-ordination causing pneumonia" that "Mr. Vinson says, 'Doc, I have a mule that is down in the back and can't get up and wish you would come out and see if you can do something for him.'" The versatile chiropractor looked over his new patient and "adjusted the mule between the hip bones." The mule recovered—presumably slowly enough to allow the adjuster to escape. The same practitioner also reports that he "was called to attend Mr. Vandalsem's Scotch Collie who was dragging his hind legs, and after adjusting the dog he improved and got quite nor-

mal." A Texas chiropractor records the interesting case of a "cow down, all swelled up, as if she would burst." Diagnosis: "A poisoned condition." Treatment: "I adjust sixth and eighth dorsals and K. P. In two minutes cow was up vomiting. I came back by in one hour, cow seemingly in normal condition." Now putting the "dorsals and K. P." of a cow in position and adjusting a mule "between the hip bones" may get chiropractors into serious trouble. It is one thing to fool with the health of human beings and an entirely different thing to trifle with the health of live stock. The "patent medicine" interests of the country have been powerful enough to keep off the statute books any law that would protect the public by giving it information regarding the composition of nostrums sold as home remedies. But there are some states which forbid the sale of any live stock remedy that does not bear on the label the names of its active ingredients. Hence it may easily come to pass that if the chiropractors attempt to treat cows and pigs they may find themselves in hot water. That men, ignorant of the body and its processes, should treat the ailments of men, women and children is apparently a small thing; human life is the only thing involved. But that ignoramuses should trifle with the health of a horse or a hog is an outrage; that is property. If chiropractors are wise they will confine their mal-practice to humans; it is safer.—*Jour. A. M. A., Sept. 17, 1921.*

(Concluded from page 150)

Medical School and one year's internship in an acceptable hospital. These examinations have covered all the subjects of the medical school curriculum and have been conducted by members of the Board with members of the profession resident in the place of examination appointed to help them. Such examinations have been held in Washington, Philadelphia, New York City, Boston, Chicago, St. Louis, Rochester (Minnesota) and Minneapolis. During the war a combined examination was held at Fort Oglethorpe and Fort Riley. There have been 325 candidates examined, of whom 269 have passed and been granted certificates.

Starting with the endorsement of the Council on Medical Education of the American Medical

Association, American Medical College Association and various sectional Medical Societies, the recognition of the Army, Navy and Public Health Service Medical Corps of the United States and certain State Boards of Medical Examiners, the certificate is now recognized. Also by twenty states as follows; Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Idaho, Iowa, Kentucky, Maryland, Minnesota, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Pennsylvania, Rhode Island, Vermont and Virginia, the Conjoint Board of England, the Triple Qualification Board of Scotland, the American College of Surgeons and the Mayo Foundation of the University of Minnesota.

There has been such a wide-spread demand for an opportunity to secure this certificate of examination, that the Board has now adopted and will put into effect at once, the following plan: Part I, to consist of a written examination in the six fundamental medical sciences: Anatomy, including histology and embryology; Physiology; Physiological Chemistry; General Pathology; Bacteriology; Materia Medica and Pharmacology. Part II, to consist of a written examination in the four following subjects: Medicine, including pediatrics, neuropsychiatry, and therapeutics; Surgery, including applied anatomy, surgical pathology and surgical specialties; Obstetrics and Gynecology; Public Health, including hygiene and medical jurisprudence. Part III, to consist of a practical examination in each of the following four subjects; Clinical Medicine, including medical pathology, applied physiology, clinical chemistry, clinical microscopy and dermatology; Clinical Surgery, including applied anatomy, surgical pathology, operative surgery, and the surgical specialties of the diseases of the eye, ear, nose and throat; Obstetrics and Gynecology; Public Health, including sanitary bacteriology and the communicable diseases.

Parts I and II will be conducted as written examinations in Class A Medical Schools and Part III will be entirely practical and clinical. In order to facilitate the carrying out of Part III, subsidiary boards will be appointed in the following cities, Boston, New York, Philadelphia, Minneapolis, Iowa City, San Francisco, Denver, New Orleans, Baltimore, Galveston, Cleveland,

St. Louis, Chicago, Washington, D. C., and Nashville, and these boards will function under the direction of the National Board. The fee of \$25.00 for the first part, \$25.00 for the second part and \$50.00 for the third part will be charged. In order to help the Board the Carnegie Foundation has appropriated \$100,000.00 over a period of five years.

At the Annual Meeting, held June 13th of this year in Boston, the following officers were elected: M. W. Ireland, Surgeon General, President; J. S. Rodman, M. D., Secretary-Treasurer; E. S. Elwood, Managing Director.

Mr. Elwood will personally visit all Class A Schools during the college year to further explain the examination, etc., to those interested. Further information may be had from the Secretary-Treasurer, Medical Arts Building, Philadelphia.

ETHER AND LAVENDER

THE TREND OF MEDICINE.

Time, 1950.

(*Suggestions for Ads., for Dept., Stores and Chain, 5 and 10s.*)

Slogan.

"CONSULT OUR DOCTORS AND TAKE TREATMENT."

See our list of desirable tonics and cough cures—A variety of colors and flavors.

Guaranteed to Please.

Our medical department cannot afford to be overlooked. Get our terms and see our specialists.—You cannot get lower.

You can be X-rayed, spectacted, splinted, osteopathed, chiropracted, massaged, dosed and bossed at attractive rates—3d aisle, right, in the (a)basement.

Leave or send your mouth-measure for a full set of false teeth with Hamburger attachments.

All mail orders promptly filled.

Why delay? See us and discover your ills. Don't remain in crass ignorance and set the whole house in an uproar by falling down stairs and breaking your neck at the age of 92, when by consulting us, it can be made easier for everybody by passing away at an earlier and probably more convenient time, in bed.

Staff cabaret and entertainment every Tuesday evening.

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ORIGINAL ARTICLES

DISCUSSION OF ONE MONTH'S TREATMENT WITH LUMINAL OF 30 SELECTED CASES OF SO-CALLED "IDIOPATHIC" EPILEPSY.

By DR. WILLIAM NEWTON HUGHES, A. M., M. D.
STATE HOSPITAL FOR MENTAL DISEASES,
Howard, R. I.

Discussion of Cases Selected.

From all the cases of epilepsy in this hospital, 30 so-called "idiopathic" cases were selected for treatment with luminal; 15 from each sex. They were those whom the doctors, nurses, and attendants thought had the most frequent and severe epileptic seizures. Only two cases above 60 years old were included among them; Case No. 10,796 is 66 years old; Case No. 11,004 is 72 years old. None of the cases were under 17 years of age. One of the female patients (Case No. 10,099) is a negress; all the other patients are white, though of various nationalities. Two of the cases (No. 10,796 and No. 8,249) are recorded as distinctly alcoholic.

The Wassermann test on the blood was negative in all cases except two. One case (No. 11,004) had a triple plus Wassermann in 1918; no treatment was given, as no signs of lues were apparent. Another Wassermann has not been recorded since that time. Another case (No. 8,971) had a double plus Wassermann in 1914. The spinal fluid also showed a double plus Wassermann; globulin plus by both Ross-Jones and Noguchi tests; no albumin; 3 cells. The "Gold Sol" test was not done. This patient was given two courses of treatment with arsphenamine, and one course with mercury. In 1920 and 1921 the blood Wassermann was negative. In February, 1921, the spinal fluid showed 200 cells, a negative Wassermann; negative globulin tests; a positive albumin test; and a C. S. S. "Gold Sol" curve (0144432100). In May, 1921, the spinal fluid was practically the same, except that the "Gold Sol" curve assumed a form, which is probably of no significance (0111000000). The

cells were not counted then, because the fluid was contaminated with blood. The frequency of the seizures, or the mental symptoms were not altered by the luetic treatment.

In three other cases, in which the spinal fluid was examined, it gave a negative Wassermann, and was essentially negative in other respects.

The majority of the cases showed mental symptoms of some sort, most often some of the following: Impaired memory, disorientation, irritability, confusion, apathy, stupidity, distractibility of attention, clouding of consciousness, silliness, tendencies to violence, total or partial absence of insight. Only four cases showed delusions or hallucinations (Cases No. 10,560; No. 8,249; No. 11,984; No. 11,982).

The physical and neurological examinations were essentially negative in all respects, except as noted. One case (No. 10,796, aged 66 years), slight arteriosclerosis; another case (No. 10,712), partial paralysis of left arm and leg; another case (No. 10,995), atrophy and paresis of right arm and leg, dating from birth. Many of the patients, of course, showed scars from injuries, received during their seizures.

The hospital histories show that, in each case selected, all the physicians present at the clinic, in which each case was studied individually, made the same diagnosis, epileptic insanity or epileptic psychosis. Two cases (No. 9,511 and No. 10,100), were imbeciles with epilepsy. One case (No. 10,039), was an epileptic with congenital mental deficiency.

The white blood counts done on 21 of the cases were within normal limits. The red blood counts done on the same cases were within normal limits in 19 instances; one case (No. 11,984), showed 3,512,000 red blood cells; another case (No. 11,004), showed 3,968,000 red blood cells.

In 16 of the same 21 cases, the records showed that the urine was negative; one case (No. 4,109), showed much pus microscopically, otherwise negative; two cases (No. 11,871 and No. 8,530), showed some albumen, otherwise

negative; another case (No. 11,642), showed some albumen and pus, otherwise negative.

In the other nine cases, the white blood count, red blood count, and urine analysis have not been recorded.

THE ADMINISTRATION OF LUMINAL.

The luminal tablets used consisted of $1\frac{1}{2}$ grains. They are white, very bitter and disagreeable to taste, but only slightly soluble in water.

Starting on July 21, 1921, two $1\frac{1}{2}$ grain tablets of luminal were given daily for two weeks, one after breakfast and one after supper. Then the dosage was cut down, and one $1\frac{1}{2}$ grain tablet was given after breakfast. A full glass of water was given after each tablet. Every patient got the luminal daily in the dosage stated above, as each patient was observed till the tablet was swallowed. Two of the female patients refused to take the luminal after breakfast for two or three days; but they took it when it was offered to them later in the day.

No change was made in the daily routine of hospital life for the patients, when the luminal was given. Their care, food, exercise, etc., remained exactly the same as it had been before the luminal was administered.

NOTES MADE ON THE CASES DURING LUMINAL.

Case No. 10,560—Disturbed and noisy since administration of luminal, because of seeing in the paper that his wife was getting a divorce. He had a slight seizure, but did not go to bed after it, as he did previously.

Case No. 10,796—Sleepy and "dopy" during the first two weeks. More disagreeable. Frequent headaches, probably post-operative from a recent enucleation of his eye.

Case No. 11,004—No symptoms of luminal medication.

Case No. 8,712—"Dopy" and sleepy during the first two weeks. Wanted to go home and to take a patient with him during the first two days of the treatment. Seizures were very slight.

Case No. 10,170—Dizzy, sleepy and "dopy" during the first two weeks. Confused during the first two days, then excited for two days. Does not work, though he did before treatment.

Case No. 8,249—"Dopy" and confused during the first four days of treatment; not so disagreeable as previously.

Case No. 6,282—Quieter and brighter. Works, though he did not do so before treatment. He had a slight seizure.

Case No. 11,642—"Dopy" and drowsy during the first two weeks.

Case No. 9,559—More quiet. Works a little, though he did not do so before treatment.

Case No. 11,413—Sleepy and "dopy" at first; more sensible. At times he apparently fainted, and, when grasped by the attendant, he laughed and fought good-naturedly with him. Works a little, though he did not do so previously.

Case No. 8,971—"Dopy," sleepy, dizzy with an occasional slight headache during the first two weeks. Does not steal, swear or fight as formerly; quieter and brighter. He had auræ on two occasions without seizures: he said, "Oh! my poor father." and then sat down and rocked, saying, "I've had another spell. I've had another spell." Again in the dining-room, he shouted, "Father, forgive me for all my sins. Oh! I'm going to have a seizure." Seizures with treatment have been slight.

Case No. 10,995—Aggressive during the first two weeks. More disagreeable.

Case No. 11,710—"Dopy," sleepy and confused during the first two weeks. Works a little, though he did not do so previously.

Case No. 11,984—"Dopy" during the first two weeks; quieter.

Case No. 7,394—Brighter. Works more than previously.

Case No. 6,890—Stupor since the first week of treatment. Would not talk or eat for several days. During the third week of treatment she became brighter and spoke. She does not yet sit up, feed herself, or speak freely.

Case No. 10,712—Sleepy, "dopy" and dizzy during the first two weeks. Would not answer when spoken to. Confusion and headache for three days during the second week.

Case No. 11,982—"Dopy," drowsy, dizzy, with headaches during the first week. She said she does not "jump at all" during her seizures under treatment.

Case No. 4,109—Sleepy, dizzy and "dopy" during the first two weeks. Brighter. She sits in a chair during her seizures under treatment, and does not have to be taken to her room as previously.

Case No. 10,099—"Dopy," dizzy and sleepy with occasional headache during the first week. During the second week she was confused, and did not recognize the Chapel. More disagreeable.

Case No. 8,530—Sleepy and dizzy during the first two weeks. More quarrelsome.

Case No. 10,100—Quieter and easier to manage. Works much better.

Case No. 9,511—No symptoms of luminal medication.

Case No. 7,384—Sleepy, dizzy and "dopy" all day during the first week. Occasional headache during the second week.

Case No. 10,039—Sleepy and occasional headache during the first week.

Case No. 10,700—Sleepy, dizzy and "dopy" during the first week. More quarrelsome. Erythema of face and neck annoyed the patient during the second week, but it is slightly better now, though it still persists.

Case No. 10,279—Sleepy, "dopy" and dizzy during the first week; confused at times. More quarrelsome.

Case No. 10,519—During the second week she became stuporous, requiring to be fed. She was confused, resistive, and complained of headaches. She became brighter in three days. During the third week, she had a similar attack of stupor.

Case No. 11,871—Slight headache during the first three days of treatment.

Case No. 9,545—Dizzy, "dopy" and sleepy throughout the treatment. She says she feels "rotten, like going to sleep forever." More quarrelsome. Acute pharyngitis during the third week of treatment.

SYMPTOMS OF LUMINAL MEDICATION.

During the first two weeks of treatment, when three grains of luminal were given daily, sleepiness, "dopiness," dizziness and headache were either complained of or noted. In two patients a stuporous state, clearing up despite the continuance of the drug, was observed.

Several of the patients with the treatment were able to start work, or to work more efficiently.

A few patients seem to become more disagreeable and quarrelsome under treatment.

Short periods of confusion were not uncommon.

EPILEPTIC SEIZURES IN MALE PATIENTS BY MONTHS.

From the 21st to the 21st (incl.).

From July 21, 1920, to July 21, 1921 (incl.):—No luminal given.

From July 21, 1921, to August 21, 1921 (incl.):—Luminal given.

Case No.	Jly.	Aug.	Spt.	Oct.	Nov.	Dec.	Jan.	Feb.	Mch.	Apr.	May	Jne.	Jly.
	'20	'20	'20	'20	'20	'20	'21	'21	'21	'21	'21	'21	'21
10,560 ..	2	1	0	0	0	1	2	3	0	0	5	2	1
10,796 ..	0	0	0	3	2	2	0	0	1	2	1	0	0
11,004 ..	1	2	3	1	2	4	1	3	5	6	3	2	1
8,712 ..	13	26	21	13	20	18	18	16	18	10	9	9	4
10,170 ..	4	1	7	0	2	1	6	0	6	5	6	5	5
8,249 ..	5	3	4	1	2	6	3	3	4	12	3	4	0
6,282 ..	2	14	9	15	5	10	6	12	9	11	7	8	1
11,642 ..	3	33	15	3	13	3	9	8	19	14	6	6	4
9,559 ..	4	13	9	8	7	5	6	4	2	8	2	4	0
11,413*	..	..	..	..	..	..	..	..	..	..	..	10	9
8,971 ..	26	32	32	19	25	22	33	29	40	22	15	19	4
10,995 ..	6	13	4	27	1	0	0	0	3	1	5	0	1
11,710**	..	..	8	7	3	10	15	2	9	10	6	14	0
11,984†	..	..	..	..	..	..	..	..	..	..	..	1	0
7,394	1	1	0	5	6	3	7	0	6	0	0	0	0

*Admitted from parole June 26, 1921.

**Admitted September 30, 1920.

†Admitted June 10, 1921, rare seizures and confusion.

EPILEPTIC SEIZURES IN FEMALE PATIENTS BY MONTHS.

From July 21, 1920, to July 21, 1921 (incl.):—No luminal given.

From July 21, 1921, to August 21, 1921 (incl.):—Luminal given.

Case No.	Jly.	Aug.	Spt.	Oct.	Nov.	Dec.	Jan.	Feb.	Mch.	Apr.	May	Jne.	Jly.
	'20	'20	'20	'20	'20	'20	'21	'21	'21	'21	'21	'21	'21
6,890 ..	10	5	3	6	12	5	10	9	9	9	9	8	0
10,712 ..	5	5	5	7	3	4	8	6	9	6	4	6	0
11,982*	..	..	..	..	..	..	..	..	..	..	..	..	6
4,109 ..	13	9	9	4	7	8	18	5	3	9	5	7	2
10,099 ..	2	6	4	3	0	0	0	0	0	3	6	0	1
8,530 ..	2	6	4	3	4	5	3	7	6	3	6	6	0
10,100 ..	8	16	12	10	7	15	19	7	7	4	11	5	0
9,511 ..	10	10	13	6	3	7	9	8	5	7	7	5	0
7,384 ..	1	0	0	0	3	1	0	2	2	8	2	6	0
10,039 ..	2	15	10	12	6	9	8	3	9	9	11	8	0
10,700 ..	9	10	17	17	10	12	7	8	15	9	14	6	1
10,279 ..	1	0	2	2	0	1	2	1	1	3	4	6	1
10,519 ..	12	6	3	7	13	9	9	6	4	9	14	13	4
11,871**	..	..	..	..	..	..	..	..	..	..	..	..	8
9,545 ..	11	19	27	13	10	6	15	24	30	4	17	22	1

*Admitted June 9, 1921; numerous seizures not recorded.

**Admitted February 25, 1921; numerous seizures not recorded.

Case No. 11,642—Was admitted on July 26, 1920.

Case No. 7,394—Was on parole from September 4, 1920, to September 8, 1920; from November 23, 1920, to December 2, 1920; from February 19, 1921, to February 21, 1921.

During July, 1921, absolutely all seizures were recorded. During the months previous to that, a few seizures may not have been recorded, as no effort was made to do so.

The above cases under one month's treatment with luminal have had less seizures as can readily be seen from the chart. Ten of the cases, who previously had three to eight seizures every month, had no seizures during the one month's treatment. In almost all cases the number of seizures during the month of treatment was less than that during the previous month; and in most cases less than that of any month during the previous year.

If the cases had been treated individually rather than as a group, it is probable that many of the seizures, which did occur, could have been avoided by increasing the dosage of the luminal.

SUMMARY.

Dizziness, "dopiness," sleepiness, and headache were the most frequent symptoms noted in the administration of luminal.

One month's treatment with luminal of the above 30 cases of so-called "Idiopathic Epilepsy" seems to show that the seizures have been reduced in number, and in severity.

Post-epileptic phenomena seem less marked since the administration of the drug.

No serious symptoms, which can be directly attributed to the luminal, were observed.

THE VALUE OF A KNOWLEDGE OF PSYCHOMETRIC METHODS TO THE DOCTOR.*

By BANICE FEINBERG,

(Interne at the State Hospital for Mental Diseases,
Howard, R. I.)

As is well known, psychometry is fast reaching a stage of vast importance as a diagnostic method in medicine. In this article I shall take this up in a brief manner, and point out its important advantages and reasons, why it is of paramount value to the physician. I shall discuss this subject in relation to its value to—1st, the average family practitioner; 2nd, the school physician; 3rd, the industrial physician; 4th, the court physician, and 5th, the physician at a hospital for mental diseases.

I—VALUE TO THE AVERAGE FAMILY PHYSICIAN.

Many a time the family doctor has been confronted by the following problem. An anxious mother tells him that her child has been making very poor progress in school, and appears stupid and listless. She wishes to know what is wrong with him. The physician, after examining the child for enlarged tonsils, adenoids, other evidences of nasal obstruction, poor teeth and other physical defects and found these negative, and having obtained a negative history of scarlet fever, meningitis, encephalitis and of such other conditions that might be etiological factors of

feeble-mindedness or mental deficiency, is in a quandary. He has, however, omitted an important means of diagnosis, which in this case is of as much value in etiology as inspection, palpation, percussion and auscultation. But if he had a knowledge of the methods of psychometry, by a few simple tests, which need not take a long time to do, he would gain very readily some valuable information in regard to the child's mentality and means might be adopted to benefit him.

The family physician is usually considered a personal friend to whom the family very frequently look for advice. Very often a mother asks advice in regard to her "Johnny." "Johnny is 11 years old and is in the seventh grade, but has done such good work in school that his teacher thinks he ought to be given an extra promotion. But don't you think that it would tax his mentality too greatly?" In a case like this the reason for Johnny's apparent aptitude in school may be due to a great deal of home-study, much more than is required, yet his mental capacity is no higher than that of his average classmates; in which case he should not be pushed ahead more rapidly than the others, but instead his hours should be regulated so that less study and more rest and other diversions should be had. On the other hand, the reason for Johnny's aptitude at school may be due to an intelligence superior to that of his average classmate of the same age; in this case Johnny should be allowed to undertake higher class work and be given extra promotions. Thus, by a knowledge of simple tests, the physician will be able to give the mother the proper advice and at least in many cases be able to determine whether the child needs further and more accurate examinations along this line, and therefore refer the case to a man trained in this work. In this way every good practitioner should be able to determine when his patient needs a specialist's attention.

2—VALUE TO THE SCHOOL PHYSICIAN.

To the school physician this is very important and he has the facilities to become very proficient and accurate in this work. In many cases the parents of the child may be ignorant, or may even be somewhat defective themselves and not know enough, even to ask advice when they need

*Read at a meeting of the Rhode Island Medical Society, September 1 1921.

it. In which case it is the duty of the school physician to come to the child's rescue and after examining him, place him where he belongs. For, if he is a defective, and especially should there be several defectives in the same class, the progress of the average normal child who is capable of more than the defective will be retarded. It is not fair to the defective, for it tends to confuse him to try to learn things that he cannot grasp. Then in the case of the child with superior intelligence, who can grasp things more easily and more quickly than the average child, it would not be fair to keep him back for the sake of others; therefore a general psychometric analysis of each student should be done and the different types weeded out and placed in their proper places, that each may derive the most benefit. Several of the colleges in this country have inaugurated these means in examining candidates for admission in addition to the regular entrance examinations.

3—VALUE TO THE INDUSTRIAL PHYSICIAN.

Many of the leading business houses and factories have a physician on the staff, and in many cases it is the duty of this physician of industrial medicine to examine applicants for positions and it often is quite a problem. Here a knowledge of these tests would be of immense service and value. By being able to pick out those with highly developed mentality and placing them in positions of responsibility where their superior mental capacity could be best made use of, and picking out those with a lower grade of mentality and giving them a type of work which does not require much mental ability, industry would become much more efficient, a great deal of money might be saved and fairness extended to the employee. This would doubtlessly result in fewer discharges for inability and errors, and would put industry on a scientific basis.

4—VALUE TO THE COURT PHYSICIAN.

One of the types of criminals, as we know, is the mentally defective type, who, in a manner, is not responsible for his deeds. Such a character should be early detected and taken care of in a proper institution. A jail term, or many jail terms, would probably have no effect upon the criminal tendency. This applies to the adult and even more so to the juvenile; and should the

court physician just spend a little time and apply a few of these tests, a great deal of harm would be prevented:

5—VALUE TO THE PHYSICIAN AT A HOSPITAL FOR MENTAL DISEASES.

To a physician in this sort of work, it is especially important. Many psychoses are due to mental deficiency and there is a defective base in many other psychoses. In this sort of work it is of great help in diagnosis. By this means, feeble-mindedness could be classified and in some cases kept at a school for the feeble-minded rather than in a hospital for mental diseases. To illustrate this and to give an idea of the character of these tests, I shall report the following cases:

Case-Hospital No. 11825—Patient, a French girl, 18 years old, well developed and nourished but rather overweight. Her history fixes epileptic attacks between 9 and 16 years of age; however, for the last two years and since she has been in this hospital, has not had any seizures. It is interesting to note that these seizures stopped at onset of menstruation. In school she could not get along with the teachers and so her entire school education was limited to a few weeks. Has never done any outside work. A mental examination was done and it was determined that she suffered from no psychosis but to some degree of mental deficiency. Then a psychometric examination was done—briefly, the methods and results are as follows:

(I used the Record Booklet for the Stanford Revision of the Binet-Simon Tests, as described in Terman's "The Measurement of Intelligence.")

First of all I showed her a puzzle board and after disarranging it, I asked her to fit it up correctly. A 7-year old child could do it in a very few minutes. This she did, but it took her nine minutes. This immediately informed me that her mental capacity is of a very low grade, so I started her with the six-year old test. Four tests were done for this year. 1.—I determined whether she was able to distinguish right and left by asking her to show me her right hand, then point to her left ear and lastly to her right eye. She pointed to the right eye correctly but others incorrectly, thus failing in this test, for all three must be given correctly to score. 2.—I then showed her some pictures from which some very

obvious organ was absent, i. e., in one the mouth was absent; in another, arms, etc. Four pictures were shown her and in order to score, three must be given correctly. This she also failed in. 3.—Then I asked her to count thirteen pennies aloud. This she did correctly. 4.—The next was a comprehension test—"What's the thing to do if it is raining when you start to school?" I asked. "Stop" was her answer. This is unsatisfactory. "What's the thing to do if you find that your house is on fire?" "Put it out," was the answer. This is satisfactory. "What's the thing to do if you are going some place and miss your car?" "Run and catch it," she replied. This is unsatisfactory, and as two replies of the three must be satisfactory in order to score, she failed in this test.

There are several other tests for the sixth year which may be done. One is to have patient name various coins—e. g., nickel, penny, quarter, dime; or another: "Is it morning or afternoon"? If six tests are done, each test represents two months credit but if four tests are done, each represents three months.

Now, seeing that she failed in several of the six-year old tests, I went back and tried the five-year test. I showed her two small square blocks which are similar in every way but weight—one weighing 15 grams, the other 3 grams. She was asked to give me the heavier one; she did this correctly three times. 2.—I showed her a card with various colors such as red, yellow, green and blue and to each of which she gave the correct name. 3.—I then asked her definitions, using the following formula:—"You have seen a You know what a is. Tell me, what is a?" This formula was used with the words "chair, horse, fork, doll, pencil and table." If patient tells of its use, it is satisfactory and four of the six definitions must be satisfactory in order to score. The girl scored on this test. 4.—Then I asked her to perform three commissions. One was to put a key on the chair, the second, to bring a box to me and the third, to shut the door. These were done correctly. In this test one may also ask for age of patient—a correct answer scoring. This she gave correctly. Thus every test done for the 5th year was answered correctly and so

five years may be considered her basal mental age.

I next started her on the 7th year test. I did four tests for this year. 1.—I showed her several pictures and asked her to tell me what each picture is about." In order to score in this test, over half must be of performance description. This she passed satisfactorily. 2.—She was then asked to repeat digits which were read, one per second. They were 31759—42835—98176. If one of three series is given correctly, it is a score. She failed in this, however. 3.—She was then asked to repeat three digits backward, viz.: 283, 427, 958. She failed in each of these. 4.—The next test was to ask her to name the days of the week. She gave—Monday, Friday and Saturday. Were she to give the days correctly, I would check up the answer by asking "What day is before Tuesday, what after Tuesday, or Thursday or Saturday, etc." However, she failed early in this test. If desired, other tests may be done, such as asking the patient to give difference between (a) a fly and a butterfly, (b) stone and egg, (c) wood and glass. Another test is to ask patient to copy a diamond which is printed on the record blank. Thus only one test out of four in the 7th year did she answer satisfactorily, thus allowing her three months' credit.

She failed in all the eighth-year tests. Of these one was to have her count backward from 20-0 in 40 seconds. One error is allowed. Another is a comprehension test. The patient is asked "What's the thing to do when you have broken something which belongs to someone else?" "When you are on your way to school and notice you are in danger of being tardy?" "If a playmate hits you without meaning to do it?" Another test is a similarity test. Patient is asked "In what way are wood and coal alike?" "Apple and peach?" "Iron and silver?" "Ship and automobile?"

Seeing that she failed utterly in the 8th year test, I concluded that her maximum mental age had been reached. Her mental age is determined as follows: The basal age was five years. One correct of four tests in the 6th year represents three months and one correct of four tests in the 7th year represents three months also, the total being five years and six months. Thus this

patient's mental capacity is equivalent to that of an average $5\frac{1}{2}$ year old normal child. By means of the Intelligence Quotient which is the ratio of the mental age to the chronological age, one is informed immediately of the patient's mental status. The chronological age is never considered above 16. The normal adult should have a mental age of about 16. So in the above case the Intelligence Quotient is $5:5-16=29$. Normal or average intelligence is between 90 and 110. Definite feeble-mindedness below 70.

Thus I have endeavored, I hope successfully, by very briefly describing the above case, to give some idea of the character of some of the standard intelligence tests. There are various kinds of intelligence tests. The above, which is part of the Stanford Revision of the Binet-Simon Tests are fully and completely described in Terman's "Measurement of Intelligence." Further, the record booklet is so arranged that all diagrams and most questions are directly before the examiner, so that it is a very easy matter to conduct these tests.

I do not mean to imply, however, that a person who has never conducted this examination before can immediately produce accurate results, neither do I imply that it is necessary to be expert in this work to produce valuable results. Fifteen to twenty examinations made, and referring to the description of these tests at frequent intervals should enable the physician to derive very valuable information. This is certainly a very easy means by which to obtain a knowledge of extremely valuable diagnostic criteria for the medical man.

In these days when hygiene is forging to the front as one of the leading and most promising fields in medicine, mental hygiene particularly so, these tests have an added value, for they must be and surely will be a part of the mental hygienic program.

R. I. BRANCH AMERICAN SOCIETY FOR THE CONTROL OF CANCER.

During the week of October 30th to November 5th the State Committees of the American Society for the Control of Cancer were actively engaged in educating the public in regard to cancer and in arousing interest among the pro-

fession itself in the lamentable facts that the death rate from cancer has been steadily increasing, that in our present state of ignorance regarding the cause of cancer our only hope of reducing the mortality lies in early operation or treatment, and that up to now, people with suspicious symptoms have been slow to report such.

This program of education included lectures to laymen and women, the distribution of literature, talks to nurses and clinics. The response has been very gratifying. With few exceptions the lectures and talks have been well attended.

It was particularly encouraging that so many physicians (nearly one hundred) gathered at the Out-Patient Department of the Rhode Island Hospital on November 2nd for a clinic on cancer and a demonstration of radium.

Dr. Herman C. Pitts as Chairman of the Rhode Island Committee, presided. He spoke in brief of the aims of the society, showed a chart of statistics for Rhode Island, giving the gradual increase in cancer mortality since 1906, and urged his hearers to use every opportunity of educating the people they come in contact with as to suspicious signs and symptoms showing the various applications for giving radium and making a few remarks concerning the physics of radium. In giving the figures for cancer of the cervix at the Rhode Island Hospital for 1921 he emphasized the fact that less than 25 per cent. of those admitted were operable, showing that cases as they come, are too far advanced for any hopeful treatment.

Dr. Kingman in speaking of cancer of the breast in women presented statistics in a series of 20 cases. This number he said is, of course, too small for drawing accurate conclusions, but did furnish certain facts. Of the 20 cases, 18 were operated. Five were in single, fifteen in married women. Four tumors occurred in women under forty. The lesion as noticed by the patient had been present from three months to 8 years. The operative mortality was 11 per cent. One of the patients, however, died two weeks after the operation from pneumonia. So that the operation itself must be considered as a remote cause. Five have already died of recurrence. Three of these deaths were among the patients under 40. The longest period elapsing between operation

and death from recurrence being six years. Four of the five recurrences were in the living. Ten patients are alive and well—the shortest time elapsing being 12 years—the shortest, one month.

The pathological examination in several cases showed carcinoma occurring in areas of cystic degeneration, which is more evidence to show that cystic degeneration is not an innocent process.

Dr. Kingman expressed the opinion that cases should be radiated after operation. Radiating before wastes valuable time and may make the operation more difficult. All cases in which there is no prospect of removing the growth entirely should be treated by radiation alone. X-ray is the better method of radiation in the average case.

Dr. Gerber discussed briefly some phases in the application of X-rays to cancer. He mentioned the value of the rays for their diffuse effect, in distinction to the intense concentrated local action of radium. The latter is therefore more useful in tumors of the various body cavities, or where the radium needles can actually be inserted into the substance of the tumor. The X-rays can then be used to supplement the radium by treating the areas of lymphatic distribution. This treatment of the lymphatic is absolutely essential in cancer of the tongue, lip, external genitalia, breast, etc. The lymphatics can be treated with radium also, but to do it efficiently requires much larger amounts of radium than are available, except in a very few large institutions. An efficient amount of X-rays on the other hand can be easily obtained.

In uterine cancer, the combination treatment to the primary growth is especially valuable. Radium can be applied to the cervix by means of needles and tubes in the canal, while additional radiation is obtained by X-rays from outside the abdomen. This combination will be more apt to give a lethal dose of radiation to the cervical growth without the local dangers that might occur from over dosage with radium alone.

In the past five years the Germans have developed the treatment of pelvic cancer with X-rays, so that it is now much more intensive and efficient. This has been the result of the use of rays of a very much higher degree of penetra-

tion than had ever been used before. By using these more penetrating rays, together with heavier fitters, greater skin distance, multiple portals of entry and increased time, a tremendous dosage of rays can be applied to the malignant process, together with the neighboring lymphatics. The improved practical results from this treatment seem to warrant its further use.

In concluding Dr. Gerber emphasized the necessity of estimating the results of radium or X-ray treatment more fairly than is often done. The radiation treatment should not be regarded as a failure merely because the cancer is not cured. It is not right to use such a standard. One must consider first whether the treatment is to be merely palliative, or whether the case is of such a type that more can be expected. In inoperable and recurrent cases, if radiation results merely in temporary improvement, or in lessening pain, hemorrhage or disagreeable discharge, the treatment is to be considered successful regardless of the fact that the patient may eventually die of an extension or a recurrence of the growth.

The talks were followed by a demonstration of cases. Some of these had been operated upon, some treated by radium and still others were so far advanced that no sort of treatment offered any hope of relief.

After the clinic, a light luncheon was served.

The interest shown was very gratifying and it is to be hoped that as a result the cases coming for treatment in the future will show that the seed has not fallen altogether on barren ground!

NOTES.

The Rhode Island Committee of the American Society for the Control of Cancer, held a Cancer Clinic with demonstration of radium, November 2, 1921, from 10 A. M. to 12 M. Through the courtesy of the Board of Trustees of the Rhode Island Hospital, the clinic was held at the Out-Patient Department of the Hospital. Buffet luncheon was afterwards served. Herman C. Pitts, M. D., is chairman of Rhode Island Committee.

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EDITORIALS

A DESIDERATUM IN CLINICAL MEDICINE.

As, day by day, we read the medical journals which come to our desks, it must occur to us that in the midst of plenty we are relatively poor—poor in the literature of clinical medicine. We are grateful, of course, for the informing and often painstaking contributions upon the chemical, microscopical and bacteriological aspects of medi-

cal matters, but we miss very much the clinical note in present-day writing. The statistical method of reporting cases, complicated tables which are difficult to read, general statements about this or that diagnostic procedure, somewhat vague reports of therapeutic results,—we have in plenty; but where shall we look for the reports of clinical studies presented with clearness, directness and precision? Not long ago we read through a well-known medical journal and found the most valuable thing in it to be

the account of a perplexing problem in diagnosis which, after much labor, was solved to the credit of the physician and the great benefit of his patient. And where had the editor placed it? Set in fine print, cheek by jowl with the advertisements. Surely this is not to show a fine sense of values, and yet it does embody a certain standard of taste in contemporary medical journalism.

Aristotle said a good many centuries ago that there is no science of the individual. And who can deny the truth of his statement? In science we deal with general and more or less abstract propositions, a necessary procedure if knowledge is to rise above the present moment and establish principles of universal validity. But in this process of abstraction and generalization there is a lopping off of those concrete, individualizing, and so to say, private notes which give to each person his specific characters whether of mind or body; and it is just these specific characters in diseases which give rise to our perplexities and doubts. Why then do we not hear more about them? Since there is no science of the individual we may suppose that scientific, that is, general propositions, need addition here, subtraction there, perhaps qualification everywhere, before they can be made to fit the concrete instance.

Is it then really very helpful to us in our daily work to be told for example that of one hundred gastric perforations from ulcer twenty-seven died without operation and fifteen with operation? Supposing this to be true, what then? Shall we or shall we not, on that account, invoke the aid of surgery for the next perforation of gastric ulcer which confronts us in practice? Such general statements leave us in the cold. Let us, however, imagine that we are privileged to attend the clinic of the physician or the surgeon who wrote the journal article we are supposing ourselves to have read. What a difference is here! Do we discuss with him general averages and abstract propositions? Not at all, or at any rate, not much. We ask him about the medical, social and other history of Mary X, who sits in front of us. Then we inquire what are the data supplied by various examinations and the method of their co-ordination, and finally we are anxious to know what it is proper to do for Mary X under the circumstances, and the thing having been done, we want to know what were the results, favor-

able or otherwise. These different kinds of information having been given us we go away feeling, and rightly so, that we have spent our time to excellent purpose. We have learned from our teacher not his thoughts alone, but his ways of thinking as well—which is of equal importance—and this too not in a balloon but in the actual handling of a living patient.

We do not need, indeed rather we do not desire, a large number of patients at one time for this sort of study. Sir Dominic Corrigan had three patients at his disposal when he described permanent patency of the aortic valves: Graves derived his description of exophthalmic goitre from the observation of no great number of patients: Laennec contrived his stethoscope to banish his native reticence in the instance of one young girl. And so with other valuable and even classical contributions to medicine. If a man talks concretely in his clinic and in conversation with his colleagues, why should he not write after the same fashion? His conversation is rich with the nourishing stuff of concreteness: why should his writing be afflicted with the pale cast of abstract thought?

Who can explain our worship of mere members? Well, perhaps it is the reflection in our minds of the spirit of the age. Every democracy, knowing no better, likes to count heads, and medicine in a democracy cannot hope to escape altogether this alluring habit. Only do not let us deceive ourselves. The worship of numbers has this bad effect, that it discourages young men. Mistakenly they think that they must have seen a great number of cases before they dare or are competent to write about anything. This is wrong, for it is not the age of the brain that counts, but the value of the thought. Never was a more opportune time than the present for the renaissance of the tradition of clinical medicine. As yet we have plenty of room for a few more Oslers, Trousseaus and Flints. And be it remembered they all began to write while they were yet young.

Why all this preaching? Because this journal would be proud to print something worthy of the undoubted abilities of the young men hereabouts. Surely there must be amongst us young men—and older ones too—who can be coaxed to cast aside their natural modesty and to break their too-long-continued silence.

LICENSING OF HOSPITALS AND DISPENSARIES.

There is now under discussion proper legislation to put into the hands of the State Board of Health the power to license hospitals, and possibly dispensaries. It is well known among the physicians that there are in existence in this State so-called hospitals and dispensaries which are not a credit to the medical profession and some of which are a menace to the public. Physicians should see to it that such institutions be not allowed to continue. Individual doctors are reticent about making specific charges against them and it seems very proper that the State Board of Health should be clothed with the power to allow only such hospitals and dispensaries to be established or survive, as are conducted by reputable persons, and which are properly equipped to furnish acceptable medical service.

The Health Department of New York City is clothed with very broad powers and during the last few years has suppressed many illegitimate institutions and has materially raised the standard of work done by legitimate hospitals and dispensaries. The various institutions of the city have co-operated willingly. They are visited annually and must satisfy the Health Department that they are properly equipped, conducted by reputable people, and are provided with adequate records of patients treated.

Is it not highly desirable that the State Board of Health be given this authority which, so long as it is properly exercised, should be supported by the practitioners of the State?

THE INTELLECTUAL SNOB IN MEDICINE.

The snob is always with us and the snob is always vile. The social snob, the moneyed snob and the intellectual snob, each ever trying to impress all about him with his own particular brand of superiority. In medicine we see him, the recently graduated interne of the big hospital, unable to confer with a colleague of commoner general-practitioner clay without betraying his contempt for the other's lack of familiarity with recent scientific investigations, and at the same time utterly unable to appreciate, much less to imitate, the fine acumen and mature judgment

which characterize the opinions of his older confrere. Later we see him, the would-be leading consultant, unable to keep out of his conversation such phrases as "When I worked with the Mayos" or "In an article I published last May," and all too willing politely to ignore suggestions of one whose association with the leaders of the profession has been less intimate than his own. When it comes to the carrying of hope and aid to the stricken in mind and body or to the building up of the morale of the family, such a man is worse than useless and his exhibitions of erudition are the acme of futility.

The field of medicine is too broad and the opportunities for careful observation too general for anyone to assume that he can know the hundredth part of it all or that his brother with less conspicuous advantages must be an *ignotus*. The mass of the unknown still looms so great a bulk across our path that we can but approach each problem in the spirit so emphasized by that great teacher, Sir William Osler,—the spirit of humility.

A TRAVESTY.

A world without imagination is synonymous to a world without ambition and without hope. Imagination opens a vista of fame and hope urges us on; from birth to death our ambition, sometimes faltering tho always with us, with hope, too often like a mirage, as a lure, is ever before us.

As children we run in little troops, want to live in caves and holes in ground and eat berries, half raw fish and purloined eggs, only a little later to develop a desire to go fighting Indians and other parallel aggressive pastimes.

Still later we are impelled to test our physical powers in competitive games against our fellows; and through it all imagination draws a picture, bright or dim, of greatness if not grandeur, in which upon inspection, we find our own likeness prominently in the van. Great failures may be ascribed to imagination, but still it is our gracious heritage; never was there a hero, scientist, explorer or warrior who was not a person of imagination. It is, however, apt to run tangent and we meet unexpected candidates to fame; the heavy eating, thick witted man imagining that as

a cross-examiner at law, he would be a wizard, the blear-eyed spectacled, thin-voiced hundred and twenty pounder imagines himself a general and commanding untold hosts and the man who was never able to save a cent imagines that with a hundred and fifty thousand dollars, he could astound the world. All of which foregoing leads up to the greater imagining of them all, that our gentle and altogether more fragile female sex may indulge in violent sports and games and not pay the price. Speaking of woman, collectively, she is temperamentally non-fitted for heavy contact games such as baseball, football, polo, wrestling or boxing. Physically and anatomically, she is absolutely disqualified. This does not mean that athletic diversions have no value, on the contrary; the day of asthetic, lacksidaisical, semi-invalidism for woman has past, but to jeopardize health present and future by dangerous so-called "sports" is, to say the least, reprehensible.

A bruise on the breast may mean little to a man but, setting aside the possibility of inviting disease, may mean pain and misery to a woman in after years when milk ducts bound by adhesions due to old injury either defeat lactation completely or substantially circumscribe function. Again her pelvic organs, delicately balanced and suspended as they are, while toned and strengthened by judicious exercise, are always susceptible to serious displacement (a forerunner of chronic invalidism) by violence; if, however, the proponents of over-strenuous exercises are in some small doubt about the consequences, our surgeons and gynecologists are in possession of a satisfactory and conclusive argument.

If the broken leg reported to have been sustained by one of the Missouri College girls during football practice is her only injury her mental tranquility need not be disturbed; yet as the man said who had been knocked down by an automobile—"it ain't done no good." Games of this type should have no place in the curricula of girls' colleges or any extension courses in educational institutions. Give the girls athletics suitable for the female anatomy while building up the mind and the result is virile *health*. Do this and cease to worry about the future welfare of the nation.

LETTER FROM PARIS.

There has been much progress in medicine since the war and the laboratories and clinics of the Faculty of Medicine have been well re-organized. The Faculty, in contrast to the dark days of the war, is once more the scene of busy students, and one sees men from almost every country.

Foreign doctors who wish to matriculate at the Faculty of Medicine may do so by applying to the Secretary, and upon the payment of a small fee, he is allowed to attend all lectures, clinics, as well as have access to the library and museum. All facilities are offered to foreigners who wish to study in Paris, and there is a Bureau of Information at the Faculty for foreigners, and the work is arranged by a person who speaks English.

Doctor M. H. Cesbron is secretary-general of the association for the development of medical relations between France and the allied countries and friends, and the plans are to give foreigners every opportunity to see the work they are especially interested in.

The surgical clinics at the Hôtel Dieu, under the direction of Professor M. Hartman, are very interesting, while at the Cochin Hospital, Professor Delbet has charge of clinical surgery. Professor Lejars is in the service of surgery at the St. Antoine Hospital; Professor Legueu has charge of clinical surgery of the urinary tract at the Necker Hospital; Professors Cuneo and Duval at the Lariboisière Hospital, Professor Broca, in charge of the surgical clinics for infants, and Dr. Ombredanne, agrégé, at the Hospital des Enfants Malades; Professor Gosset, at Hospice de la Salpêtrière, and many others.

At the Hôtel Dieu, one of the oldest hospitals in the world, Professor A. Gilbert has charge of the Department of Clinical Medicine, and it is a very interesting clinic. Professor Gilbert is one of the world's great clinicians. At the Hospital Cochin, Professor Widal has charge of clinical medicine and it is one of the foremost clinics of the world. There are many other medical clinics of great importance in Paris.

The Institute of Radium of the University of Paris is a very interesting place to visit and one sees the work of Mme. Curie at the Curie Laboratory and the important clinic of Dr. Regaud at this institute. Dr. Regaud is assisted

in the clinical work by Drs. Cesbron, Monod and Richard, and the association of the laboratory of Mme. Curie and the Laboratory Pasteur, of which Dr. Regaud is director of biology, makes this radium research work a most valuable one. I have seen some remarkable results in Dr. Regaud's clinic, especially in cancer of the tongue and of the uterus. Dr. Coutard has charge of the X-ray laboratory; Dr. Lacassagne, the Department of Histology, and Dr. Ferroux, Department of Physics.

Much attention is being directed to the X-ray work done by the Germans during the war, and now the researches of Mm. Seitz and Wintz at the gynecological clinic at Erlangen is being studied. With the new German apparatus and the Furstenau tube they claim that they are able to give 200,000 volts with this special apparatus, and a treatment lasting several hours is given for cancers of the internal organs. This new German tube is, practically speaking, the Coolidge tube made much larger.

Those who were fortunate enough to see the work of Dr. Ledoux-Lebard in his clinic at Tours during the war will remember that he was using deep treatments at that time and the results were in many cases most satisfactory. Now, a few years afterwards, many of these internal tumors have not recurred. In Dr. Ledoux-Lebard's laboratory was originated a method by which the same deep treatments as given by the German apparatus can be given with a Coolidge tube. This high-power X-ray machine is now being made and will have a special box in which the Coolidge tube will be immersed in oil, as a result of which the tube can be used for several hours at one time with an equivalence of the huge German apparatus, namely, 200,000 volts. Deep therapy with X-rays is very important and will undoubtedly solve many problems.

MALFORD THEWLIS, M. D.

41 Avenue Kléber, Paris.

SOCIETY MEETINGS

PAWTUCKET MEDICAL ASSOCIATION.

The regular monthly meeting of the Pawtucket Medical Association was held on Thursday evening, October 20, at the Hotel Georgian. The president, John F. Kenney, presided.

After the business meeting, Dr. Joseph Dowling of Providence read an interesting paper on early cataract operation.

A committee on resolutions was appointed with reference to the death of Edward S. Kiley, a former charter member of the association.

Following the meeting, a collation was served. Meeting adjourned at 11:15 p. m.

DR. A. H. MERDINYAN, *Secretary*.

PROVIDENCE MEDICAL ASSOCIATION.

October 3, 1921.

The regular monthly meeting of the Providence Medical Association was called to order by Dr. N. Darrell Harvey, Vice President at 9:00 P. M. on October 3, 1921, at the Medical Library.

The records of the last meeting were read and approved.

A letter from the Chemical Warfare Service, U. S. A., was read, requesting members to cooperate in following the results of warfare gas.

Applications for membership of the following men having been approved by the Standing Committee, the Secretary was empowered to cast one ballot for their election: Dr. Frank Brown Berry, Dr. Roy Blosser, Dr. Samuel Kennison.

Dr. Barrows reported a case of mesenteric cyst which he marsupialized and packed at one operation, later repeating this procedure and after the second operation the patient was able to return to work in three weeks.

Dr. Noyes reported a case and necropsy of tubo-ovarian abscess after self-induced abortion, showing the specimen. Dr. John G. O'Meara read the paper of the evening on Social Welfare Activities of Interest to Physicians. He spoke of recent legislation about venereal disease, birth registration and Workmen's Compensation Act, discussing the laws of the different states concerning the last subject, mentioned briefly health insurance and dwelt at length on the Shepard-Towner and Smith-Towner bills as substitutes for health insurance. Dr. O'Meara discussed the group system of practice and community hospitals and spoke of the medico-social activities in the different counties of the State. The underlying sentiment of the paper was a warning against an increasing tendency to federalism in health matters.

There was a discussion by Drs. George S. Mathews, D. Frank Gray, John B. McKenna and Dr. O'Meara.

The meeting adjourned at 10:40 P. M. Attendance: Forty-four members and three guests. Collation was served.

Respectfully submitted,

PETER PINEO CHASE, M. D.,
Secretary.

R. I. MEDICO-LEGAL SOCIETY.

Regular quarterly meeting of the Rhode Island Medico-Legal Society was held at the Medical Library October 27, 1921, eleven members and one guest present.

Meeting called to order at 5:20 P. M. by the President, R. S. Wilcox, M. D.

Reports of the Secretary and Treasurer were read and approved.

Mr. Henry D. C. Dubois for the Committee on By-law Revision, reports no changes advisable but suggests that a roster of membership be prepared for insertion into the present copies.

On motion of Dr. Reed the committee was empowered to carry out these suggestions.

A communication from the American Red Cross was received, read, and placed on file. On motion of Dr. F. N. Brown it was voted that the papers presented at our meetings be made available for publication; subject to the consent of the writer. Dr. Elliott Washburn, Medical Director of the Providence Tuberculosis League, was introduced, who gave a very pleasing and interesting address on "Present Prospects of the Tuberculosis Problem."

After a brief discussion of the paper a rising vote of thanks was tendered the speaker, and the meeting adjourned. Collation followed.

H. S. FLYNN, *Secy.*

RHODE ISLAND OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

The regular bi-monthly meeting of the Rhode Island Ophthalmological and Otological Society was held in the Out Patient Department of the Rhode Island Hospital on October 13, 1921, at 8 o'clock.

The program of the evening consisted of a presentation of many interesting eye, ear, nose and throat cases, including report of removal of

foreign body from the lung, by Dr. Bigelow; demonstration of a case of sympathetic ophthalmia by Dr. Leech; case of congenital coloboma of iris-choroid, by Dr. McCabe; case of retinitis pigmentosa, by Dr. Astle; a case of complicated cataract with removal of immature cataract by the intra-capsular method, by Dr. Dowling.

The paper of the evening was by Dr. Rogers and consisted of many of his professional reminiscences during his many years of practice.

The meeting adjourned at 11 o'clock.

J. L. DOWLING, M. D., *Secretary.*

WASHINGTON COUNTY MEDICAL SOCIETY.

Quarterly meeting of the Washington County Medical Society was held at the Colonial Club, Westerly, Thursday morning, October 13, 1921, with an average attendance.

Dr. Champlin reported progress on the local hospital situation and stated that the committee had raised some \$73,000 in subscriptions, not including the Endowment Fund.

An amendment to the By-Laws was presented—That the dues be five dollars per year.

Dr. Carl D. Sawyer of Providence gave an interesting address on "Radium" and was accorded a rising vote of thanks.

Adjourned and dined.

W. A. HILLARD, M. D., *Secretary.*

HOSPITALS

ST. JOSEPH'S HOSPITAL.

Regular meetings of staff was held Fridays, September 16th and October 14th at 9 p. m., at Out Patient Building, Plenty street.

GEORGE F. JOHNSON, *Secretary.*

MISCELLANEOUS

WHAT IS PROGRESS IN OBSTETRICS?

As one reads obstetric textbooks, ancient or modern, one finds repeated again and again the caution to regard normal labor as a physiologic function and to consider interference only in the presence of definite pathologic indications. Recently, however, there has seemed to be a change in the way of radical interference even in normal labor. Obstetricians in this country appear to be

aligning themselves definitely into two camps—conservatives and radicals. At the last session of the American Gynecological Society, opportunity was given for a statement of the platform supported by the opposing parties.

Dr. Rudolph W. Holmes¹ took the position that the indiscriminate employment of operative intervention in obstetrics has accomplished little in the way of conservation of life of either the mother or the child. He deprecated the ruthless operative course in all parturient women as a solution for the troubles incident to the hazards of birth. He pointed out that very little has been contributed in the last forty years to the art of obstetrics. The old masters developed a nicety of technic in the handling of labors which was a guarantee of excellent outcome in the large majority of instances, but the death rates from eclampsia and placenta praevia as complications seem to have been reduced little if at all. Recalling the fiasco of the twilight sleep furore and the dangerous results from thoughtless laudation of the reputed harmless virtues of pituitary solution, Dr. Holmes emphasized that the basic error which has crept into the obstetric field is the belief that pregnancy and labor are pathologic conditions and that child-bearing is a disease which must be terminated by some spectacular procedure. His criticisms are not addressed to the general practitioner but to the reputed leaders in obstetrics who sponsor intervention during labor. "No one," he said, "is doing so much of this needless operative interference as many of our reputed leaders, and they know not the wreck they have wrought, for they hear only the encomiums of their fallacious representations and their misapplied skill. . . . The general polemic that labor is a species of the torture of the inquisition has been advanced so frequently that many defend most drastic interferences on the score of saving women this horror—that the dread on the part of women of this frightful agony warrants any and all kinds of expedients to relieve them of the various stages of labor, when, in fact, too often these strictures are merely the shibboleths of those who would operate with little or no provocation." Among the practices

which Dr. Holmes condemns are the routine shortening of the first stage by introduction of a bag, the slashing of the parturient canal when dilation is completed, the routine practice of version, the extraordinarily large number of cesarean operations, and finally, the practically invariable application of forceps merely to hasten delivery. Meddlesome midwifery has developed from minor transgressions to major surgery. So much for the views of the conservatives.

In the discussion, members of the opposite camp stated their point of view. The proponent of version, Dr. I. W. Potter, opposed to the induction of labor and the use of bags, argued that his method was less painful, and resulted in fewer complications and in a lowered maternal and fetal mortality. The proponent of prophylactic forceps, Dr. J. B. De Lee, considering pituitary solution a criminal agent if applied before the delivery of the child, stated his belief that women are even ready to undergo the increased risk of cesarean section to avoid the perils and pain of even an ordinary labor. He claimed that the powers of natural labor are dangerous and destructive in many instances to both mother and child. He combines his frequent application of forceps with episiotomy in many cases. He has however, no sympathy for Potter's podalic version, stating that the published results as to mortality condemn the method. Other obstetricians presented pleas for special methods, or cited arguments for or against the methods already mentioned.

In determining where the truth lies, the application of common sense and ordinary logic will yield a solution as readily in this as in any other scientific problem. Through years of experience, the medical profession has learned and is continuing to experience in practice that the ways of Nature are best, that while there is a tendency to the destruction of life there is a greater tendency toward its conservation, and that a middle course is practically always the correct one. There can be no application of routine methods with efficient results. Our greatest leaders have ever appreciated that individualization of the patients is the sine qua non of success. Give Nature her opportunity in every normal patient, and interfere only in the presence of pathologic

¹ Holmes, R. W.: *The Fads and Fancies of Obstetrics* Am. J. Obst. & Gynec. 2: 225 (Sept.) 1921.

conditions representing actual indication for intervention; this has been a true principle of medical practice in the past, and it is true to-day. —*Jour. A. M. A.*, Oct. 15, 1921.

"EAT-MORE" CAMPAIGNS.

This is the day of the "Eat-More" campaign. From billboards, newspaper advertisements and periodical pages, the slogan "Eat-More" crashes upon the reader's intelligence. He is besought to eat more meat; he is requested to eat more raisins; it is hoped that he will eat more oranges; he is invited to eat more apples; the coffee planters beg him to drink more coffee; the tea importers beseech him to imbibe more tea, and the tobacco manufacturers plead for purchase in carton rather than in individual package. And whenever possible the earnest advertiser drags in a medical argument to sustain his plea. Without reference to the actual injustice of any of this advertising, it is well to bear in mind that greatest of all medical aphorisms: "Moderation in all things." —*Jour. A. M. A.*, October 1, 1921.

CASE REPORT

REPORT OF A CASE OF STRICTURE OF THE URETHRA COMPLICATED BY PERIURETHRAL ABSCESS AND ABSCESS OF THE ABDOMINAL WALL AND BACK.

BY CHARLES O. COOKE, A. M., M. D.,
Providence, R. I.

The patient, a man fifty-one years of age, who had had a stricture for twenty years, was first seen by me on December 18, 1919, and gave the following history. One week ago he woke up in the night with chills, fever and vomiting. He had no urinary disturbance and passed water without difficulty. Two days ago a swelling appeared in the perineum, which grew steadily larger and to-day he noticed a swelling over the lower abdomen. The stricture was last dilated nine years ago.

Examination showed a red, tender, fluctuating mass in the perineum. There was redness and swelling over the lower abdomen. Temperature was 102° and pulse was 92. The patient looked very sick. He was sent into the hospital and operation was performed at once.

The urethra was first dilated. A tight stricture was found five inches from the meatus, deep in the anterior urethra. A filliform bougie was passed after considerable difficulty and urethra was dilated to 24F with Philips bougies. An incision three inches long was then made in the right side of the perineum relieving considerable foul smelling pus. A French clamp was then passed up beside the urethra on the right side, the tip of the clamp passing easily above the pubes. An incision was made above the pubes over the tip of the clamp, opening a circumscribed abscess. The incision was enlarged and a large amount of foul smelling pus obtained. The tissues were dark and gangrenous. Drains were inserted.

The cellulitis of the abdomen continued to spread until it reached the right axilla and right lumbar region and the temperature remained high.

On December 23, 1919, the patient was again operated on and many incisions were made in the abdominal wall and back and rubber tissue drains were inserted. The incisions were washed out several times a day with Dakin's solution and temperature and pulse rapidly returned to normal. The incisions, of which there were eighteen, healed kindly with little scarring.

Convalescence was steady and patient left the hospital February 27, 1920. Since leaving the hospital, the patient has had sounds passed regularly every three months and has remained perfectly well.

DR. WILLIAM J. BURGE.*
ON HIS NINETIETH BIRTHDAY.
By DR. WILLIAM R. WHITE.

Two most distinguished given names
Are borne by you, friend William James;
And when we add the "Burge, M. D."
It's surely "Sir to you," say we.

We've much enjoyed this dainty spread
With you, sir, seated at the head.
Right well you fill that honored chair
With your fine patriarchal air.

*Lines read at dinner in celebration of Dr. Burge's anniversary, April 12, 1921.

For us, how easy to forget,
A year has passed since last we met!
Indeed we could almost now say
We all were here but yesterday.

So brief the time, as we review
The year which then to us was new,
And which to us with all its days
Made this date then seem off a ways.

Old Father Time with even pace
Just bears along the human race.
So quickly though the years go by
We really feel that time does fly.

Dear Doctor Burge, it may be said,
That while this year has onward sped,
Your friends have been rejoicing much,
That on your head so gentle touch

Was lightly placed that even you
Could scarce believe the year were through;
That naught of health or strength you lost
Through winter's days of chill and frost.

But April twelve of twenty-one,
This very day was sure to come;
And to its roll call, loud and clear,
To our great joy you answer "Here."

And as its days you've journeyed through,
We all have kept along with you.
Whatever records we may show,
As fast as you we've had to go.

And like yourself to-night we find
Another year is left behind;
Whatever we have done with it,
Another page of life is writ.

Good deeds and bad, sins great and small,
Which we regret but can't recall,
What's said is said, what's done is done,
It's only forward, life can run.

To-night let us most thankful be,
That we no empty chair must see.
That you our table's head still grace,
Who most deserve that honored place.

That son and daughter, kind and true,
Still share this happy home with you.
And here, sweet child Penelope,
Who now is four, last year was three.

What twelfth of April, twenty-two,
Will bring to either us or you,
It's doubtless best we may not know;
From day to day our lives will go,

And little Karl, the household joy,
A baby then, he's now a boy.
And Dr. Leonard, friend indeed,
A comrade real in time of need.

And last the scribbler, Dr. White,
Whose pen of you delights to write!
Congratulations, dear good man,
Who fearlessly may bid us scan

The pages of your ninety years,
No shameful blot on one appears.
Though you in years are four score ten,
You younger seem than many men

Who have not seen three score go past,
Whose strength they know cannot long last;
Who would their riches gladly give
Their early life again to live.

Your many, many friends are glad
To think of the good times you've had
Your life has known more smiles than tears
In the last one of ninety years.

You've journeyed some both east and west,
To kindred greet as you found best;
Your army comrades were sought out
And civil war scenes talked about.

You surely do impression give
A happy thing it is to live.
That this hold true to distant day
We friends of yours devoutly pray.

We love to see you, hear you talk,
Your voice is strong, erect you walk.
May you go on from day to day
Still showing us life's better way.

We wonder how to you it seems
Full four score years to view in dreams.
And live through scenes of long ago,
Of which you now alone can know.

Of all who on your natal night
Rejoiced with love and pure delight,
That you though babe that night began
The making of a splendid man.

They all long since have passed away,
Great gift to us is that you stay
To tell us tales, that we may know
Great men and deeds of long ago.

As He directs, Who knoweth all,
Who seeth e'en the sparrow's fall,
Who for us doeth all things well,
Whose gift it is that we here dwell.

But I expect in twenty-two
To take another look at you,
As in this home erect you stand
A grandchild held by either hand,

Just as cheerful, just as bright.
As we enjoy you here to-night.
I'm not the writing prophet bold
To say you'll then be getting old.

At ninety-one you'll have a right
To glasses wear to aid your sight,
And though you'll not be one bit lame
You may be wise to sport a cane.

And I will venture quite a bet.
No one of us can match your step,
No one of us, however bold,
Can head you off in story told.

And be you near or be you far,
We'll know it by your good cigar.
Perchance with us you'll grape juice quaff
While spinning yarns to make us laugh.

As you are now we'll want you then,
The dearest, best of gentlemen;
We'll not count years, but to the end
We'll hold you comrade, brother, friend.

But now my pleasure let it be
To tell how you confounded me.
So these good friends of ours may see
Just how you put it over me.

'Twas in your church one summer day
That to your rector you did say,
In just these words, most mild of sins,
"Doctor White and I are twins."

Now, doctor dear, you were a man
When I my life on earth began.
But what I say right now is true
I'd be most proud if twin to you.

Now friends, I must not more prolong
This friendly, loving rhythmic song.
To stop is not so easy when
One's feelings simply guide one's pen.

No man may know how long he'll live,
His length of years not man's to give,
To earthly life an end must come,
Each gets a call to rest; work's done.

You sir have lived for ninety years,
That you've lived well it now appears.
The rule of life for you and me,
Each day and hour to ready be.

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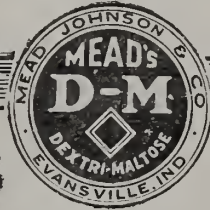


IN inflammations of the respiratory apparatus, especially in bronchitis, Calcreose has won a place in the therapeutic armamentarium of the physician. It is of value in the treatment of bronchitis associated with *pulmonary tuberculosis*, because it has creosote effect without untoward action on the stomach, such as nausea, disagreeable eructations and distress.

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MEAD'S DEXTRI-MALTOSE FOR INFANTS ON PRESCRIPTION

MEAD'S DEXTRI-MALTOSE is prepared to aid the physicians in the scientific regulation of the infants' dietary.

So that each problem may be worked out individually as it should be the Mead Johnson selling policy is such that directions must come from physicians. MEAD'S DEXTRI-MALTOSE therefore is sold as a prescription product. It is advertised only to physicians and trade packages carry no directions for feeding. It is the physician's prescription blank that tells the mother how to use MEAD'S DEXTRI-MALTOSE (Dextrins & Maltose). She is encouraged to report back to the doctor's office from time to time for further directions.

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Please write for Samples and Literature before you forget it.

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The entire stomach gland tissue juice

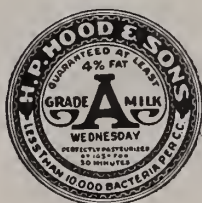
Promotes therapeutic measures, dietary and drug, in the treatment of disease associated with gastric insufficiency and disorders of metabolism.

In tuberculosis, for example, it has been reported of a very special service.

Fairchild Bros. & Foster

Gastron is alcohol and sugar free

NEW YORK



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box.

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and tablets. An-
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Powder & Tabs.
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tary Powder and
Tabs.

Corpus Luteum
(true) powder
and 2 and 5 grain
Tabs, and 2 and 5
grain capsules.

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and powder.

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ferments that act in acid medium. It is recommended as an aid to digestion
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which is one of the principal causes of autointoxication.

Elixir of Enzymes is an excellent adjuvant and vehicle for exhibiting iodids,
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To exhibit, for instance, 20 grains of potassium iodid three times daily, use one
teaspoonful of Elixir of Enzymes, one teaspoonful of the above solution to half-pint
of lukewarm milk; stir thoroughly and let stand until cool. Take one-third of this
quantity as a dose. This junket should be made up fresh every morning.

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will be sent gratis to physicians.*

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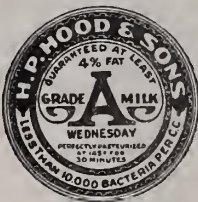
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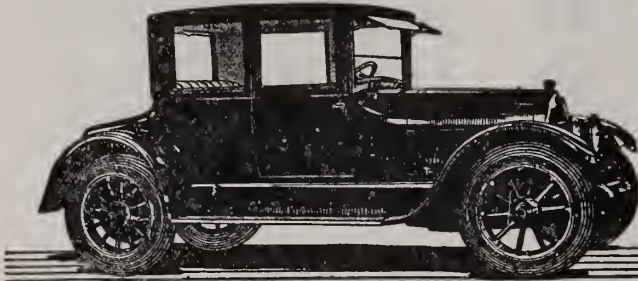
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So we have prepared a booklet and a card index which give corrective diets in the various types of Diarrhoeas the physician meets with in private practice.

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1. Relief, almost immediate, from the often intense distress of acid, flatulent indigestion.
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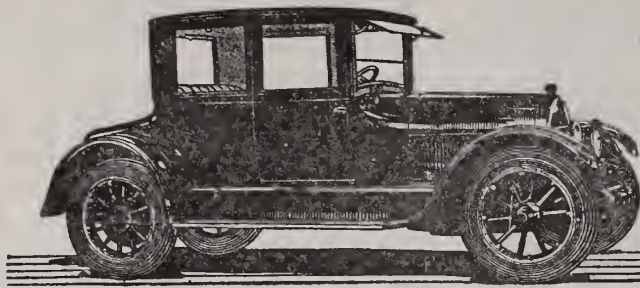
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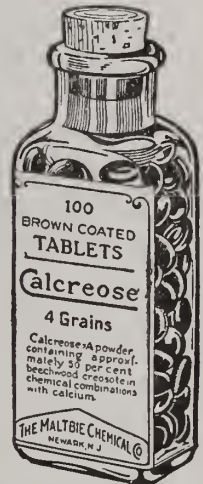
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Suprarenal Cortex

powder and three grain tablets.

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powder and five grain tablets.

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Plain, and Chromic (boilable),
60 inch and 20 inch.
Iodized (nonboilable) 60 inch.

"Just what a ligature should be."

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Malt Soup gives gratifying results in feeding Marasmic Babies—MEAD'S DRY MALT SOUP.

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Literature and Samples on Request

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EVANSVILLE INDIANA, U.S.A.

Holadin and Bile Salts

Holadin - - 2½ grs.

Bile Salts - - ½ gr.

(enteric capsules)

"Investigations begun originally by Professor Nencki in his Berne laboratory and carried on by Heidehain, Rachford, Williams and Martin, have shown that the bile has a favouring action on the ferments of the pancreatic juice.

"The Bile, indeed, proved itself to be a constant and powerful auxiliary of the pancreatic juice, a fluid which is of such importance for digestion and in itself already so complicated."

—Prof. J. P. Pawlow

"Holadin and Bile Salts", a combination of the most potent pancreas extract with the isolated glycocholate and taurocholate of sodium, in their native association—

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New York

In consideration of scurvy:-

McCollum's opinion is that "scurvy" is not a "deficiency" disease. Certain infants fed "a milk pasteurized at 145°F. for 30 minutes did not develop scurvy". Even "boiled milk" has been extensively fed to infants in various parts of the world and in the experience of * * * * * observers does not induce scurvy.

"There is a bacteriological factor involved in the causation of scurvy".



We are corroborated by McCollum in stating that pasteurization is not accountable for scurvy. In pasteurizing Hood's Milk we do not render it deficient in antiscorbutic potency. We do make it definitely safe.

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Infant Feeding



Diet Materials

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MEAD'S DEXTRI-MALTOSE is DEXTRINS and MALTOSE just as the name implies. Moreover, it is DEXTRINS and MALTOSE WITHOUT DIRECTIONS printed on the package. "D-M" is furnished with POTASSIUM BICARBONATE, or with SODIUM CHLORIDE. Also furnished PLAIN in order that the Doctor may prescribe any other food salts desired.

THE USE OF "D-M" MEANS INDIVIDUAL INFANT FEEDING

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16 ounces in every package—MORE FOR LESS, NOT LESS FOR MORE

Full literature and samples on request

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THE RHODE ISLAND MEDICAL JOURNAL



Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME IV }
NO. 11 } Whole No. 146

PROVIDENCE, R. I., NOVEMBER, 1921

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Armour's Iodized Sheep Gut Ligatures

which are made from lamb's gut selected in our abattoirs especially for surgical purposes.

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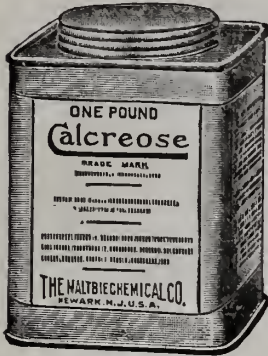
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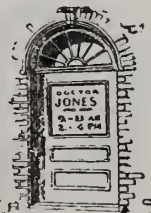
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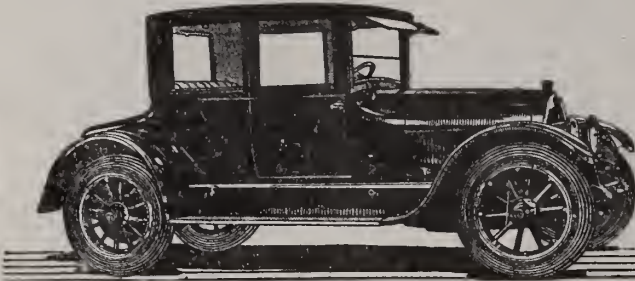
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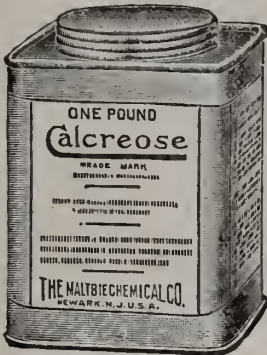
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